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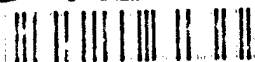


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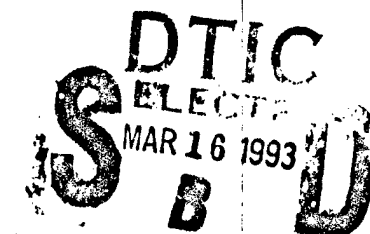
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NAVAL POSTGRADUATE SCHOOL

Monterey, California



THESIS

AN ANALYSIS OF THE NAVY'S
FINANCIAL MANAGEMENT
SUBSPECIALTY REQUIREMENTS

by

Richard Todd Palmer

December, 1992

Thesis Advisor:

James M. Fremgen

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An Analysis of the Navy's
Financial Management
Subspecialty Requirements

by

Richard Todd Palmer
Lieutenant, United States Navy
B.S., Central Missouri State University, 1980

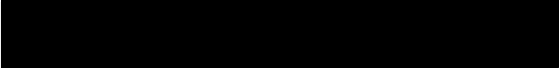
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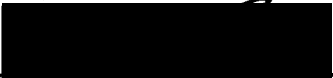
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ABSTRACT

This study analyzes the current financial management needs of the Navy in terms of the skills required for officers to perform effectively in a wide range of financial management subspecialty billets, and in terms of the development of these skills through Master's degree level education at the Naval Postgraduate School. The study identifies and defines the most required financial management skills and observes significant skill requirement patterns and relationships between these skills and a set of billet "identifier" categories. The identifier categories used are the billets' command echelon within the Navy's budgeting hierarchy, the billets' rank and designator requirements, and the billets' P or Q code. In addition, this study determines that the subspecialty's Educational Skill Requirements and the Naval Postgraduate School financial management curriculum both provide adequate coverage of all of the Navy's P and Q coded financial management billets' most required financial management skills.

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I. INTRODUCTION

A. FOCUS OF THE THESIS

In 1992, it is a fact of life that the Department of Defense (DoD) in general, and the Navy, in particular, are operating in an ever-changing and uncertain world of diminished budgetary funding. Therefore, in this atmosphere, there is a continued need for a cadre of highly trained and professionally competent Navy financial managers. The efforts of this group of professionals are essential to enabling the Navy to maximize benefits from the shrinking pool of budgetary resources.

The major thrust of this study will be to analyze the current financial management needs of the Navy in terms of the skills required to perform effectively in a wide range of financial management subspecialty billets and, in terms of the development of these skills through Master's degree level postgraduate education in the financial management field.

B. RESEARCH QUESTIONS

The primary research question to be examined will be

What are the important financial and non-financial skill or knowledge requirements for Navy financial management subspecialty (XX31) Master's degree level coded (P or Q coded) billets?

Subsidiary research questions to be examined include

Are there any significant skill requirement patterns present as a result of examining the present Navy financial management subspecialty P and Q coded billet structure by considering the billets' officer billet designator code (OBDC), military rank requirements, command echelon level within the Navy budgeting hierarchy, or by the billets' P or Q code distinction?

Do financial management subspecialty educational skill requirements (ESRs) adequately and appropriately reflect the Navy's financial management subspecialty billet requirements?

Does the Naval Postgraduate School (NPS) financial management curriculum provide coverage of all of the Navy's financial management subspecialty billet requirements?

Should there be standardization of the financial management subspecialty billet justification/request write-up?

C. DATA EXAMINED/RESEARCH METHODOLOGY

Key to this study was the need to first identify and compile the financial management requirements of the Navy. This was accomplished through a thorough examination of the financial management subspecialty P and Q coded billet justifications that were provided to the Fiscal Year (FY) 1992 Subspecialty Review Board (SRB). The purpose of these justifications is to state specific reasons as to why a billet should require a subspecialty code and to state the skills necessary to perform in the billet. For the purposes of this study these billets were subdivided into "identifiers" or categories by billet designator and military rank requirements, by command echelon level, and by subspecialty billet code (P or Q). Content analysis was first conducted in

order to identify specific skills necessary for performance in each billet. The compilation of these skills into categories resulted in the thirteen billet skills that were used throughout this study.

Next, the skills and identifiers were compared in order to observe patterns of skill requirements and to conduct statistical analysis of the dependent or independent relationships between them. This was accomplished through utilization of the computer-based Statistical Program for Social Sciences (SPSS) [Ref. 1].

Third, the skills identified from the billet justifications were compared to the ESR's in order to determine if the ESR's were adequately defined in terms of billet needs. The ESRs and skills were then summarized in tabular form to show which ESRs covered which skills.

Finally, the NPS financial management curriculum content was examined. The pertinent information regarding each course was identified and cross-referenced to the skills identified from the billet justifications. From this, the financial management core curriculum courses and their relationships with the skills were summarized in tabular form to show which courses covered which skills.

D. OUTLINE FOR THE REMAINING CHAPTERS

Chapter II describes specific background information related to the study in four areas. First, it describes the

SRB process, subspecialty billet justifications, and the purposes of both. Second, it will describe Navy subspecialty billet types, who manages these billets, and the role of the manager. Specific focus is upon P and Q coded billets. Third, the roles of NPS and N-82 in Navy financial management education will be discussed. Lastly, an explanation of the billet identifiers used in the study will be laid out.

Chapter III is a presentation of the data collected and utilized in the study. In this chapter, detailed tabular presentations depicting the data derived from the study are presented. Appropriate descriptions of the data collected accompany this presentation as necessary.

Chapter IV is the data analysis and findings presentation, which provides both non-statistical and statistical analysis of the data derived from comparisons of billet justification skill requirements to the subspecialty billets' designators, ranks, command echelon levels, and subspecialty codes. In addition, comparative analyses between ESRs and the billet skills identified from the justifications, and between the NPS financial management curriculum core courses and the billet skills, are presented.

Chapter V presents specific conclusions and recommendations which were logically drawn from the study. These are submitted for the purpose of promoting improvement in the Navy's financial management educational process.

Recommendations for further study are also provided in this chapter.

E. SUMMARY OF FINDINGS AND CONCLUSIONS

The findings and conclusions of this study relate to the primary and subsidiary research questions posed in Section 3. First, there are a set of identifiable and definable skills that are required to perform in financial management subspecialty P and Q coded billets. These skills represent the current financial management billet requirements and needs of the Navy. Second, there are observable skill requirement patterns present when examining these skills within the context of the identifier categories and the levels within these categories. Third, the Educational Skill Requirements (ESRs) for the Financial Management subspecialty adequately reflect the Navy's financial management billet requirements. Fourth, the Naval Postgraduate School financial management curriculum adequately reflects the Navy's financial management billet requirements. The course offerings in the curriculum cover the skills most requested by the activities which utilize financial management subspecialists in P or Q coded billets.

The next chapter lays out the background information necessary for understanding the analysis to follow.

II. BACKGROUND

A. SUBSPECIALTY ESTABLISHMENT AND REVIEW PROCESS

For United States Naval Officers the area of specialization (or specialty) required in a billet is identified by a designator code representing a line officer community such as Air, Surface, or Submarine Warfare or a staff officer community such as Supply. Billets requiring additional qualifications beyond those indicated by designator are further identified by subspecialties such as Financial Management, Electronic Warfare, or Aeronautical Engineering. Therefore, subspecialties are professional development fields secondary to specialties. [Ref. 2]

In OPNAV Instruction series 1211.6, the Naval Officer Subspecialty System is described as

...an integrated manpower, personnel, and education management system designed to develop the specialized skills and knowledge necessary to satisfy specific Navy billet functions...the subspecialty system classifies and controls billets requiring officers who have specialized experience, training, or postgraduate education...in fields of interest to the Navy. [Ref. 3]

The Navy's Subspecialty Review Board (SRB) concept was established in 1975. This was done in response to a Congressional mandate which grew out of several manpower studies in the early-to-mid 1970's. These studies examined

the Navy's effectiveness in its utilization of officers who possessed government-funded postgraduate education. [Ref. 4]

Convened by Deputy Chief of Naval Operations (DCNO) (Manpower, Personnel and Training) (OP-01), the SRB is charged with the functions of classifying and approving the Navy's subspecialty billet structure. This is accomplished by means of a biennial review and revalidation of all subspecialty requirements. The SRB is comprised of two groups, a "Working Group" and an "Executive Panel". [Ref. 3]

The Working Group is composed of primary subspecialty sponsors and consultants, and officer designator community representatives, and is chaired by the Subspecialty Requirements Coordinator (OP-114D1). Primary sponsors are headquarters level activities that represent the specific needs of the major activities that are users of officers occupying subspecialty coded billets. Consultants are other headquarters level activities that represent the education and skill fields within particular subspecialty areas. They recommend to the primary sponsor the curricula required to support the educational skill requirements of the subspecialty. [Ref. 3]

The Executive Panel membership is drawn from flag-level representation throughout the Navy. It is comprised of representatives from the following organizations: [Ref. 5]

- DCNO (Manpower, Personnel and Training) (OP-01)
- ACNO (Undersea Warfare) (OP-02)

- ACNO (Surface Warfare) (OP-03)
- ACNO (Air Warfare) (OP-05)
- DCNO (Plans, Policy, and Operations) (OP-06)
- DCNO (Navy Program Planning) (OP-08)
- Director of Space, Command and Control (OP-094)
- DCNO (Naval Warfare) (OP-07)
- Director of Research and Development Requirements, Test and Evaluation (OP-098)
- One flag representative from among the major systems commands (SYSCOMs) on a rotational basis

The above list is the current Executive Panel organization as of the date of this writing. It is anticipated that the composition of this panel will change after the reorganization of the Office of the Chief of Naval Operations, which was in process as this study was being written.

The SRB process begins with the primary program sponsor's receipt of a formatted subspecialty billet request from an activity. The format of this request is shown in Figure 1. The request may be for a new subspecialty coded billet, a subspecialty code change, or for a validation review of an existing subspecialty coded billet. In each request, the skills required for the billet must be clearly stated and justified in terms of the primary sponsor's Educational Skill Requirements (ESR's) for that particular subspecialty. Figure 2 states the ESR's for the Financial Management subspecialty. [Ref.5]

SUBSPECIALTY BILLET REQUEST

_____ Date ☐ New/Change ☐ Delete ☐ SRB Review

1. Activity Title: _____
2. 10-digit Code UIC
3. Billet Sequence Code (BSC):
 OLD (current) NEW (if changing)
4. Billet Designator and Rank (numeric & alphabetic):
5. Billet Title: _____
6. ASSIGNED Subspecialty Code: (P) (S)
7. REQUESTED Subspecialty Code: (P) (S)
8. Work Center mission/function statement:

9. Work Center Subspecialty Requirements (provide "BSC/SSC" only):

10. Specific justification for subspecialty code requested:

11. Subspecialty Compensation:

(UIC) (BSC) (SSC)

Claimant: CODE: _____ POC: _____ TEL: _____

Subspecialty Billet Request Form

Figure 1

SUBSPECIALTY BILLET REQUEST INSTRUCTIONS

The Subspecialty Billet Request is prepared by the activity where the billet resides and may only contain UNCLASSIFIED information. The request is typed single-sided on plain white bond (suitable for reproduction) and is normally prepared on one page (must not exceed two pages). The ORIGINAL form is sent via the activity manpower element to OCHO (Attn: OP-114) or BUMED (Attn: MED-154) as appropriate. One copy of the Subspecialty Billet Request form is maintained on file at the command where the subspecialty billet resides. A second copy is maintained at the claimant level to support biennial SRS reviews.

DATE: Type or stamp.

NEW/CHANGE: Place an "X" in this block to indicate a request to code a new billet or change the existing code.

DELETE: Place an "X" in this block to indicate a request to un-code billet.

SRS REVIEW: Place an "X" in this block to indicate that form is being submitted in conjunction with the SRS review process (NOTE - changes to billet designator, grade, title etc., cannot be accomplished during the SRS review process).

1. ACTIVITY TITLE. Enter activity/UIC name as listed on activity ODCR or MPA.
2. 10-DIGIT CODE. Enter 10-digit code as listed on activity ODCR or MPA.
3. BILLET SEQUENCE CODE (BSC). Provide old and new codes as applicable.
4. BILLET DESIGNATOR AND RANK. Enter the 4-digit designator code followed by the alphabetic single-letter rank code i.e.: ENS = L LTJG = K LT = J LCDR = I CDR = H CAPT = G
5. BILLET TITLE. Transcribe billet title from activity ODCR or MPA.
6. ASSIGNED SUBSPECIALTY CODE. List the primary subspecialty code (from ODCR or MPA) or leave blank if billet is not currently coded. Likewise, list the secondary subspecialty code, if assigned.

(DO NOT COMPLETE REMAINDER OF FORM IF "SUBSPECIALTY BILLET REQUEST" IS BEING SUBMITTED TO UN-CODE BILLET)

7. REQUESTED SUBSPECIALTY CODE. Enter primary and, if supported, a secondary subspecialty code.
8. WORK CENTER MISSION/FUNCTION STATEMENT. Using the infinitive form of the verb (i.e. to sponsor, to conduct, to maintain), provide a brief statement that describes the major task performed by the work center to effect accomplishment of the activities mission. Avoid listing purposes, procedures and methods or functions.
9. WORK CENTER SUBSPECIALTY REQUIREMENTS (BSC/SEC). List the BSC/SEC (i.e., "02350/00430") of all other subspecialty-coded billets in the work center that are coded at the time of request. For echelon 1, 2, and 3 commands, work center is considered to be a branch or section. For echelon 4, 5 and 6 commands, work center applies to the activity/UIC level. OPNAVINST 1008.16 (series) Section 405 refers.
10. SPECIFIC ANTICIPATION FOR SUBSPECIALTY CODE REQUESTER. Using the third person, singular form of the verb (e.g., coordinates, develops, advises), provide a statement of the major duties and the scope of the responsibilities to be performed by the incumbent. A graduate level education requirement must clearly be supported by this description of duties.
11. SUBSPECIALTY COMPETITION. Complete only when requesting a graduate level code (C, O, H, N, P or Q). Do not complete if request is submitted in response to an "SRS Review".
12. CLAIMANT. Upon receipt Manpower Claimant enters 1st and 2nd digit of Claimant Code (see MPA or OPNAVINST 1008.16, Chapter 8), name and telephone number of claimant staff member who will act as first point of contact.

SEEK HELP — OCHO (OP-114) at TEL:(A)224-4933/(C)202)494-4933 for PL/URL/Staff Corps coding.
BUMED (MED-154) TEL:(A)294-0399/(C)202)453-0399 for Medical Department coding.

Subspecialty Billet Request Form Instructions

Figure 1 (Reverse side)

1. A comprehensive understanding of all aspects of the DoN budget cycle, including planning, programming and budget formulation and execution.
2. The ability to identify, analyze and prepare effective and economic program alternatives. An ability to prepare and evaluate cost estimates.
3. The ability to manage and control funds, including appropriated, revolving and nonappropriated funds, to support approved programs.
4. The ability to develop and review financial reports and analyze budget execution against operating and financial plans, and to develop alternative plans based on analysis of an activity's financial performance. An ability to recommend or make management decisions regarding the reallocation or reprogramming of funds.
5. A comprehensive knowledge of the principles of finance and business management, in both the public and private sectors, to support participation and leadership in the development, implementation and administration of fiscal policies, procedures, systems and controls to ensure the responsible use of available resources.
6. The ability to develop and use internal control and audit techniques to establish sound management controls and to evaluate financial reports and operating performance.
7. The ability to determine the unit costs of outputs and to use such costs in the analysis of performance and allocation of resources.
8. An understanding of the acquisition process as it relates to procurement and development appropriations.
9. An understanding of joint and maritime strategic planning.
10. The ability to recognize issues of potential importance to the Navy, formulate a research program, perform the necessary research and report the results.

Educational Skill Requirements (ESR)
for the Financial Management Subspecialty
(XX31)

Figure 2

The requests are initially reviewed by interested parties at the primary sponsor level. The basic decision criterion used in this review is whether or not a billet request "makes sense". That is, they seek to find billet duplications and to find billets that may need to be created, modified, consolidated, eliminated, or otherwise changed due to creation or elimination of military activities and their associated subspecialty personnel requirements. [Ref. 6]

Next, the primary sponsor's representative meets with the designator representative to determine any specific subspecialty billet requirements for a particular officer designator community. Basically, this process determines the essential billets for a community. After the billet requests pass through this process, they are forwarded to the SRB Working Group. [Ref. 6]

The Working Group reviews the subspecialty billet requests received from the primary sponsor. The main purpose of this review is to build a consensus as to what the billet requirements and structure should be for a specific subspecialty skill field. Upon completion of their work, the results of the Working Group's deliberations are forwarded to the Executive Panel. [Ref. 6]

The Executive Panel convenes in order to review the billet justification and to grant final approval to the Navy's subspecialty billet structure. If all requests have been properly "staffed" at the Working Group level and in earlier

reviews, the Executive Panel may just "rubber-stamp" the billet requests. Conversely, in the current world of budget and personnel cuts, it can be fairly stated that thorough scrutiny of the requests occurs at this level in the review and approval process. [Ref. 6]

In summary, the SRB decides whether or not a subspecialty code is appropriate for a particular billet based upon the information provided in the billet request. The billet is expected to require skills beyond those normally expected of an officer in a specific rank and designator in order to be granted a subspecialty code.

B. THE FINANCIAL MANAGEMENT SUBSPECIALTY

The Financial Management subspecialty is one of hundreds of subspecialties in the U.S. Navy. In the Navy Financial Management Subspecialty field, the primary sponsor is N-82, in the Office of the CNO, Fiscal Management Division. Consultants include the Deputy Comptroller of the Navy (DNAVCOMPT), the Naval Supply Systems Command (NAVSUP), the Naval Sea Systems Command (NAVSEA), the Naval Air Systems Command (NAVAIR), the Bureau of Naval Medicine (BUMED-53), DCNO for Logistics (OP-04), ACNO for Air Warfare (OP-05), Director of Space, Command and Control (OP-094), and the Naval Facilities Engineering Command (NAVFAC). Officer designators represented in Navy financial management are drawn from nearly

every area in the wide spectrum of Naval warfare specialty communities. [Ref. 5]

In its role as primary sponsor of this subspecialty and the manager of all Navy financial manager billets, N-82 sets forth the ESR's necessary for performance in these billets. The billets are coded based upon the minimum education, training, experience, and skill level necessary for performance in them. There are specific criteria necessary in order for an officer to attain a particular subspecialty code in the financial management field. Figure 3 lists all of these criteria for the XX31 subspecialty letter codes.

Table I is a matrix showing the current numbers of billets, by rank and letter code. Of the current 435 financial management subspecialty coded billets, there are 272 which are coded P or Q. Some examples of these billets include:

- Business Financial Manager (BFM) in a major weapons system procurement program.
- Comptroller at a Naval Base, Naval Air Station, or other activity.
- Instructor in Financial Management education at a Department of Defense or Department of the Navy educational institution.

Appendix A contains descriptions of all of the P and Q coded justification requests that were submitted to the FY92 SRB and used as the primary data for this study.

- S-Code:** To qualify for this significant experience code, an officer should have performed for a minimum of 18 months in a validated XX31 billet requiring independent performance in matters pertaining to the budget cycle or a significant phase thereof. They should have working knowledge of:
- the controls and systems which ensure optimum utilization of resources.
 - budget request justification and review process.
 - the allocation/execution phase of the budget.
 - financial reports and be able to perform analyses of budget execution versus operating and financial plans.
 - audit and internal review of financial management systems.
- R-Code:** Requires an officer to meet the same performance criteria as "S" code with an additional 18 month minimum tour in a validated XX31 billet requiring a higher level of responsibility at the headquarters or major claimant level.
- P-Code:** In the majority of cases requires a Master's level degree from the Naval Postgraduate School approved Financial Management curriculum. On a case by case basis, individuals having completed some unique requirements at the Naval Postgraduate School and who have received a degree from some other institution will be considered but this action must be approved by the Primary Consultant.
- Q-Code:** Includes the same qualifications as a "P" code, requires at least one minimum 18 month tour in a validated XX31 billet, and demonstration of outstanding financial management performance in a supervisory or individual capacity. Requires expert knowledge of the programming process, ability to give/make and/or present sound financial management options to higher leadership.
- T-Code:** An entry level subspecialty training billet. The officer filling such a billet performs, under supervision, tasks pertaining to the budget cycle. This may include planning, programming, budget preparation, or budget execution procedures at the headquarters level. Training may include on-the-job experience as well as formal financial management courses of instruction. These billets provide the officer sufficient experience to later serve in S-coded billets.
- E-Code:** Billets requiring a combination of professional experience and a basic knowledge of financial management theories, principles, processes, and techniques certified through the acquisition of a Bachelor's level degree with major concentration in the Financial Management field. These billets require the performance of analytical work, effective assembly of information, and compilation of related reports of information essential in the financial management of Navy programs.

Financial Management Subspecialty (XX31) Billet Codes

Figure 3

TABLE I
FINANCIAL MANAGEMENT SUBSPECIALTY BILLETS
BY RANK AND CODE

RANK	Q-CODE	P-CODE	S-CODE	R-CODE	T-CODE	E-CODE
CAPT	33	18	3	1	0	0
CDR	18	101	12	4	0	0
LCDR	1	82	34	4	1	3
LT	0	19	51	0	12	21
LTJG	0	0	3	0	7	4
ENS	0	0	0	0	1	2

C. BILLET IDENTIFIERS

The financial management subspecialty billets analyzed in this study will be categorized according to four characteristics, or identifiers. These are the billet designator, rank requirement, the command echelon level in which the billet resides, and the applicable subspecialty billet code (P or Q). The first three of these - designator, rank, and command echelon - are described below. Information regarding subspecialty billet codes may be found in Figure 3.

1. Designator

Naval Officer Billet Designator Codes (OBDC's) are four digit numbers used to identify the primary Naval specialty qualifications required of the billet incumbent and to administratively categorize officer billets for proper management and identification. There are currently thirteen different OBDC's represented in the total population of financial management subspecialty P and Q coded billets. An explanation of each OBDC follows: [Ref. 5]

- 1000: An Unrestricted Line Officer billet which may be filled by an appropriately skilled and experienced officer.
- 1050: An Unrestricted Line Officer billet requiring an officer qualified in any one of the warfare specialties and of rank Lieutenant and above.
- 1110: An Unrestricted Line Officer billet requiring Surface Warfare qualification.
- 1300: An Unrestricted Line Officer billet, other than operational flying (flying status terminated), requiring a current or previous Air Warfare specialty of Pilot or

Naval Flight Officer, and rank of Lieutenant and above. May fill 1000 and 1050 billets if otherwise qualified.

- 1302: An Unrestricted Line Officer billet, operational flying included, requiring the Air Warfare specialty of Pilot or Naval Flight Officer, and rank of Lieutenant and above.
- 1510: An Aerospace Engineering Duty Officer requiring the Aerospace Engineering (AEO) specialty.
- 1610: A Special Duty Officer billet requiring Cryptology specialty.
- 1630: A Special Duty Officer billet requiring Intelligence specialty.
- 2300: A Staff Corps Officer billet requiring Medical Service specialty.
- 3100: A Staff Corps Officer billet requiring Supply specialty.
- 3104: A Materiel Professional designated Staff Corps billet requiring Supply specialty.
- 5100: A Staff Corps Officer billet requiring Civil Engineering specialty.
- 5104: A Materiel Professional designated Staff Corps Officer billet requiring Civil Engineering specialty.

2. Rank

Subspecialty billets will not normally be filled with officers below the rank of lieutenant commander. In the financial management subspecialty there are a very limited number of P coded billets for lieutenants. Flag-rank and warrant-grade officers do not fill subspecialty coded billets. Some examples of the types of billets filled, by rank, are as follows: [Ref. 7]

- Captain: Key fiscal planning and budget management billets at the headquarters staff level to include the

Office of the Comptroller of the Navy (NAVCOMPT), the Office of the CNO (CPNAV), NAVAIR, NAVSUP, NAVSEA (SYSCOM's), the Office of the Chief of Naval Education and Training (CNET), and the Bureau of Naval Personnel (BUPERS). Others include fleet and force commander level comptroller billets as well as Naval Shipyard comptroller billets.

- Commander: Financial analysis, budgeting, cost analysis, and fiscal planning billets at the above activities as well as at other major staffs involved in fiscal planning. In addition, they fill comptroller billets at Naval Air Stations, Naval Stations, Naval Supply Centers, and other fleet support stations, centers, and offices.
- Lieutenant Commander: Financial management and budget analysis billets at the headquarters staff and SYSCOM level, comptroller billets at smaller Naval Air Stations and Training Commands.

Table I showed the numerical breakdown of financial management subspecialty billets by rank and code.

3. Command Echelon

The command echelon for a billet is the hierarchical position in the Navy's budgeting chain of command at which the activity holding that billet is located. An explanation of each level in the hierarchy follows: [Ref. 8]

- SECNAV/NAVCOMPT: Prescribes Navy budgeting procedures and policies; Provides guidance, instructions, and review for budget preparation; Reviews financial requirements and justifications for Navy programs and coordinates preparation of the budget for submission to the Office of the Secretary of Defense (OSD), the Office of Management and Budget (OMB), and the Congress; Allocates funding to SYSCOMs, bureaus, and offices; Conducts continuous review of the execution of approved budget plans and programs.
- Responsible Office (RO): An office, bureau, SYSCOM, or headquarters which has the assigned responsibility for overall management for all programs financed by an appropriation; Allocates funds to Administrative Offices (AO's).

- AO/Major Claimant/Budget Submitting Office: An office, bureau, SYSCOM, or headquarters assigned responsibility by an RO for budgeting, controlling financial obligations, tracking expenditures, accounting and reporting accuracy for assigned programs financed under appropriations or appropriation subdivisions.
- Sub-claimant/Type Commander (TYCOM)/Sub-allocation Holder: An intermediate level command assigned responsibility by an AO for budgeting, controlling obligations, tracking expenditures, accounting and reporting accuracy for assigned programs financed under an appropriation subdivision.
- Fund Administration Activity (FAA)/Responsibility Center: An organization unit headed by an officer or supervisor who is responsible for the management of resources in the unit, and who, in most instances, can significantly influence the expenses incurred in the unit; Normally issued an operating budget/allotment from an AO or sub-claimant.
- Cost Center: An aircraft squadron, ship, staff, or subdivision of an FAA for which identification of costs is desired.

D. THE ROLES OF THE NAVAL POSTGRADUATE SCHOOL AND N-82

The roles of the Naval Postgraduate School (NPS) and N-82 in the Navy financial management subspecialty postgraduate education program are closely related. They are jointly responsible for the content of the Financial Management curriculum at NPS in order to ensure that it continues to support the subspecialty and to prepare officers to fill P and Q coded billets.

Every two years, the Financial Management curriculum content is examined jointly by NPS and OP-82 by means of a Graduate Education Curriculum Review. The directive for this review is OPNAV Instruction 1520.23B. [Ref. 9] The procedures

to be followed in this review are promulgated in NPS Instruction 1550.1 series. [Ref. 10]

NPS is charged with implementing the Navy's graduate level education programs and acts as the academic coordinator for the approved curricula of such programs as Financial Management. N-82, in its role as primary sponsor of the NPS Financial Management education program, is responsible for the development and update of ESRs for the program. NPS tailors the Financial Management curriculum to reflect the ESRs.

This chapter laid out the background information needed to understand the data that were compiled and analyzed in this study. Next, Chapter III presents the data in preparation for the statistical and non-statistical testing to be done in Chapter IV.

III. PRESENTATION OF DATA COLLECTED

A. DATA SUMMARY

The data collected and coded for this study are summarized in Appendices A and B. These are the data from the 346 P and Q-coded financial management subspecialty billet requests in Appendix B that were submitted to the FY92 Subspecialty Requirements Board (SRB). A total of 277 P-coded and 69 Q-coded billet requests are represented in the data set. Table II is an excerpt from Appendix B. It shows the format of the various data collected.

1. Billet Identification Elements

Billet identification elements within Table II include the four billet identifiers from Chapter II, Section C (rank, designator, command echelon, and P or Q code designation) as well as some additional elements useful to the identification of the billet data utilized in this study. A description of the columnar billet identification elements contained in Table II follows:

- Billet Sequence Code (BSC): A five digit number assigned to billets, positions, or titles within an activity's Manpower Authorization [Ref. 5]. It is used as an automated data processing control to sequence the billet entry on the Manpower Authorization and to identify the specific billet or position. In this study, the BSC is used only to identify each of the billets used as the primary data. Some are duplicates and may be present at more than one activity.

TABLE II

SAMPLE OF FINANCIAL MANAGEMENT SUBSPECIALTY
BILLET DATA FROM APPENDIX B

	bac	echelon	subcat	desig	rank	code	s1	s2	s3	s4	s5	s6	s7	s8	s9	s10	s11	s12	s13
1	11180	3	a	1000	i	p	1	1	0	0	1	1	0	0	0	0	1	0	0
2	10750	3	a	1000	h	p	1	1	0	0	1	0	0	1	0	1	0	0	0
3	13140	3	a	5100	h	p	1	1	1	0	1	0	0	1	0	1	0	0	0
4	13160	3	a	1000	h	p	1	1	1	0	1	0	0	1	0	1	0	0	0
5	14010	3	a	3104	h	p	1	1	0	0	1	0	1	1	0	1	0	0	0
6	12220	2	a	1050	h	p	1	1	1	0	1	0	0	1	0	1	0	0	0
7	13120	3	a	5100	h	p	1	1	1	0	1	0	0	1	0	1	0	0	0
8	13100	3	a	1000	h	p	1	1	1	0	1	0	0	1	0	1	0	0	0
9	12260	3	a	1110	h	p	1	1	1	0	1	0	0	1	0	0	0	0	0
10	12250	3	a	1000	h	p	1	1	1	0	1	0	0	1	0	1	0	0	0
11	12230	2	a	3100	h	p	1	1	1	0	1	0	0	1	0	1	0	0	0
12	12150	3	a	5100	h	p	1	1	1	0	1	0	0	1	0	1	0	0	0
13	42200	3	a	5100	i	p	1	1	1	1	1	0	0	0	0	0	0	0	0
14	300	5	a	5104	g	p	1	1	1	1	1	0	1	0	0	0	1	1	0
15	500	5	a	5100	h	p	1	1	1	1	1	0	1	0	0	0	1	1	0
16	200	5	a	5104	g	p	1	1	1	1	1	0	1	0	0	0	1	1	0
17	30200	5	a	5100	i	p	1	1	1	1	1	0	1	0	0	1	1	1	0
18	40660	3	a	3100	i	p	1	1	1	1	1	0	0	0	0	0	0	0	0
19	47250	3	a	3100	h	p	1	1	1	1	1	1	0	0	0	1	0	0	0

- Command Echelon (ECHELON): Delineates the command echelon level within the Navy budgeting hierarchy in which the particular billet resides. A detailed description of each level within the hierarchy is contained in Chapter II, Section C, Subsection 3. The numerical identification codes used in Table II for the billets' echelon levels are:

- 1-SECNAV/NAVCOMPT
- 2-Responsible Office (RO)
- 3-Administering Office (AO)
- 4-Sub-claimant
- 5-Fund Administering Activity (FAA)
- 6-Cost Center

- Subcategory (SUBCAT): Delineates the subcategorization of a billet as a managerial, comptroller, or instructional billet within the applicable Navy budgeting hierarchy level. The letter identification codes used for subcategory identification in Table II are:

A-Managerial: Billets, excluding comptroller and instructional billets whose responsibilities involve Navy program financial management. These programs cover a wide range of missions and support funding areas including, but not limited to, aircraft procurement and shipbuilding, supply and maintenance, training, and intelligence.

B-Comptroller: Billets specifically identified as comptroller billets, whose responsibility is that of Navy facility financial management through proper formulation and execution of, and accounting for, an activity's operating budget.

C-Instructor: Billets specifically identified as instructional in nature, in the area of financial management education. These billets are found at DoD academic institutions.

- Designator (DESIG): Delineates the primary officer specialty qualifications required for each billet. A detailed description of each applicable designator is contained in Chapter II, Section C, Subsection 1.

- Rank (RANK): Delineates the occupational levels associated with the scale of Naval Officer paygrade and rank. The letter identification codes used for each rank category in Table II are:

G-Captain
H-Commander
I-Lieutenant Commander
J-Lieutenant

- Code (CODE): Delineates the subspecialty alphabetic code or suffix assigned to a particular subspecialty billet. A detailed description of each code is contained in Figure 3. Appendix B and Table II only contain the Master's degree level P and Q-coded billets examined in this study.

2. Billet Skills

All submitting activities' billet requests were analyzed for identifiable, specific skills. These skills were then placed into thirteen skill categories for tabulation and statistical analysis purposes. Most of the billet requests were quite clear as to what specific skills were required for a particular billet. These skills tended to fit rather cleanly into the list of skills below. Other billet requests were somewhat vague in their requests for specific skills. Therefore, a judgement was sometimes required as to which skill categories they fit into. No attempt was made to read into the billet justifications skills that were not specifically requested by the submitting activity. These skills comprise the thirteen most important financial and non-financial skill requirements for Navy financial management subspecialty Master's degree level (P and Q coded) billets.

[Ref. 11]

In Table II, each skill that was requested for a specific billet is identified by the digit "1". Each skill that was not requested is identified by the digit "0". A description of each of the billet skills and skill codes contained in Table II follows:

- Budget Analysis Skills (S1): These skills encompass the in-depth review and analysis of activity and subordinate command budget submissions. In addition, these skills require the ability to recognize and initiate optimum resource allocation and re-allocation, as required.
- Financial Policy/Advisory Skills (S2): These skills involve functioning as financial advisor to primary and subordinate commands on all financial matters. In addition, these skills require the ability to draft policy and guidance covering accounting procedures, budget input submissions, and financial resource utilizations.
- Budget Formulation Skills (S3): These skills involve the ability to translate program requirements into financial plans which may be included in the activity's budget.
- Budget Execution Skills (S4): These skills involve executing the activity's existing budget and recommending reallocation of financial resources if required. Included in this skill is the ability to recognize the need for, and to possess the ability to pursue, additional funds as required.
- Department of the Navy (DoN) Budgetary Knowledge Skills (S5): These skills involve a working knowledge of the DoN budget system. This skill requirement includes knowledge of applicable terminology, time lines, and key budget players.
- Planning Programming and Budgeting System (PPBS) Skills (S6): These skills involve a working knowledge of the DoD PPBS concept. Familiarity with applicable terminology, time lines, and key budget players is required.
- Accounting Technical Skills (S7): These skills cover a wide variety of accounting areas. Typical skills include a knowledge of the accounting cycle, cash flow analysis, financial statement analysis, asset valuation, overhead cost allocation, cost benefit analysis, make or buy decisions, and capital budgeting.

- Communication and Liaison Skills (S8): These skills involve the ability to conduct clear and concise presentations on budget or program matters to interested agencies and organizations. These skills require the ability to incorporate budget and program information into presentations using current techniques and audio/visual aids.
- Contract Administration Skills (S9): These skills require the ability to interpret and administer program contracts with industry and small business organizations. An understanding of negotiated contracts and sealed bidding procedures is desired.
- Financial Reporting Skills (S10): These skills involve the ability to develop clear and concise financial summaries and reports which support programs and budgets including, but not limited to, standard financial statements.
- Supervisory Skills (S11): These skills require the ability to supervise military and civilian personnel who possess a Master's level of education.
- Auditing Skills (S12): These skills involve the ability to implement and monitor an activity's internal control systems, to audit financial statements, reports, and other financial records.
- Weapons System Acquisition Skills (S13): These skills involve the ability to understand and monitor the weapons acquisition cycle from initial concept, to full-scale production, and system phase-out/program completion.

This chapter presented the actual data in the format used for the analytical portion of this study. Chapter IV explains the analysis methods and presents the associated findings from the conduct of this analysis. In addition, Chapter IV examines the thirteen billet skills and their relationships to the financial management subspecialty ESRs and to the NPS financial management curriculum.

IV. ANALYSES AND FINDINGS

A. ANALYSIS OF THE NAVY'S FINANCIAL MANAGEMENT BILLETS

This section examines the relationships between the Navy's financial management subspecialty Master's degree level (P and Q coded) billets and the thirteen billet skills presented and defined in Chapter III, Section A, Subsection 2. The subsidiary research question this section examines is whether there are any significant billet skill patterns present as a result of comparing the billets, subclassified by their identifiers, to the thirteen billet skills identified from the billets' justification write-ups.

This analysis is presented in two subsections. In the first subsection, skill pattern findings, from examining the percentages of billets within each identifier category that require each billet skill, are presented. In the second subsection, findings are presented with regard to dependent or independent relationships between billet skills and identifier categories, based on chi-square distribution analysis.

1. Observed Patterns of Skill Requirements by Identifiers

Using the tabular data contained in Appendix B, two pieces of information were obtained. First, the frequency that each billet skill was requested for each of the levels within the four identifier categories was determined. Second,

the percentage of billets, in each of the levels within the four identifier categories, that requested each skill was determined. Table III summarizes this information. The primary methodology tool used to derive this information was the Statistical Program for Social Sciences (SPSS) [Ref. 1]. An examination of the observed patterns of skill requirements by identifiers follows. No statistical measures were used in this analysis.

a. Comparison of Billet Skills and Command Echelon

There appear to be two clear patterns and two other moderately clear patterns that exist when considering comparisons between billet skills and command echelon level.

- There is clearly an increasing need for PPBS Skills (S6) as the command echelon level in the Navy budgeting hierarchy increases.
- Also, there is clearly an increasing need for Accounting Technical Skills (S7) as the command echelon level in the Navy budgeting hierarchy decreases.
- Although there is a fairly limited frequency of need for Contracting Administration Skills (S9) within the financial management subspecialty, there is nonetheless a moderate pattern of increasing need for this skill as command echelon level decreases.
- If the SECNAV/NAVCOMPT and Cost Center levels are eliminated from consideration because of the extremely small number of billets that fall into these echelon levels, and if the limited frequency of need for Auditing Skills (S12) in financial management subspecialty P and Q coded billets is taken into account, there exists a slight pattern of increasing need for this skill as the command echelon level decreases.

TABLE III

SKILL REQUEST FREQUENCY (#) AND PERCENTAGE OF
BILLETS REQUIRING EACH SKILL (%) FOR EACH
IDENTIFIER CATEGORY

<u>ECHOLON</u>		<u>S1</u>	<u>S2</u>	<u>S3</u>	<u>S4</u>	<u>S5</u>	<u>S6</u>	<u>S7</u>	<u>S8</u>	<u>S9</u>	<u>S10</u>	<u>S11</u>	<u>S12</u>	<u>S13</u>
SECNAV/NAVCOMPT:	#	0	1	0	0	2	1	0	1	0	0	1	0	0
	%	0	50	0	0	100	50	0	50	0	0	50	0	0
RESP. OFFICE:	#	38	43	39	34	38	17	19	23	0	7	18	1	2
	%	86	95	89	77	86	39	43	52	0	16	41	2	5
ADMIN. OFFICE:	#	112	134	115	100	117	36	78	42	10	14	62	12	7
	%	79	94	81	70	82	25	55	30	7	10	44	9	5
SUB-CLAIMANT:	#	8	9	9	8	8	2	6	4	1	2	5	2	0
	%	89	89	100	89	89	22	67	44	11	22	56	22	0
FUND ADMIN. ACT.:	#	120	142	125	124	114	26	125	15	26	21	79	52	4
	%	81	96	85	84	77	18	85	10	18	14	53	35	4
COST CENTER:	#	1	1	1	1	0	0	1	0	0	0	0	0	0
	%	100	100	100	100	0	0	100	0	0	0	0	0	0
<u>RANK</u>		<u>S1</u>	<u>S2</u>	<u>S3</u>	<u>S4</u>	<u>S5</u>	<u>S6</u>	<u>S7</u>	<u>S8</u>	<u>S9</u>	<u>S10</u>	<u>S11</u>	<u>S12</u>	<u>S13</u>
CAPTAIN:	#	67	67	66	64	64	40	49	20	16	13	19	10	2
	%	94	94	93	90	90	56	69	28	23	18	27	14	3
COMMANDER:	#	123	152	130	111	135	32	94	50	16	19	77	31	6
	%	78	96	82	70	85	20	60	32	10	12	49	20	4
LT. COMMANDER:	#	71	87	74	73	64	8	64	14	4	11	54	20	3
	%	78	96	81	80	70	9	70	15	4	12	59	22	3
LIEUTENANT:	#	18	23	19	19	16	2	22	1	1	1	15	6	2
	%	69	89	73	73	62	8	85	4	4	4	57	23	8
<u>SUBSPECIALTY CODE</u>		<u>S1</u>	<u>S2</u>	<u>S3</u>	<u>S4</u>	<u>S5</u>	<u>S6</u>	<u>S7</u>	<u>S8</u>	<u>S9</u>	<u>S10</u>	<u>S11</u>	<u>S12</u>	<u>S13</u>
P:	#	212	262	224	204	216	25	185	60	14	28	155	64	11
	%	77	95	81	74	78	9	67	22	5	10	56	23	4
Q:	#	67	67	65	63	63	57	44	25	23	16	10	3	2
	%	97	97	94	91	91	83	64	36	33	23	15	4	3

TABLE III (Continued)

SKILL REQUEST FREQUENCY (#) AND PERCENTAGE OF
BILLETS REQUIRING EACH SKILL (%) FOR EACH
IDENTIFIER CATEGORY

DESIGNATOR		S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	S11	S12	S13
1000:	#	93	101	93	80	86	36	61	31	4	25	48	10	2
	%	87	94	87	75	80	34	57	29	4	23	45	9	2
1050:	#	8	10	10	8	8	5	3	6	1	1	3	1	0
	%	67	83	83	67	67	42	25	50	8	8	25	8	0
1110:	#	20	19	20	14	19	4	10	15	1	2	10	1	2
	%	100	95	100	70	95	20	50	75	5	10	50	5	10
1300:	#	2	3	2	1	2	1	1	0	0	0	0	1	0
	%	67	100	67	67	67	33	33	0	0	0	0	33	0
1302:	#	1	2	2	1	1	1	1	0	1	0	1	1	1
	%	50	100	100	50	100	50	50	0	50	0	50	50	50
1510:	#	1	1	1	1	1	0	0	0	0	0	0	0	0
	%	100	100	100	100	100	0	0	0	0	0	0	0	0
1610:	#	3	3	3	3	1	1	0	0	0	0	1	0	0
	%	100	100	100	100	33	33	0	0	0	0	33	0	0
1630:	#	1	1	1	1	1	0	1	0	0	0	0	0	0
	%	100	100	100	100	100	0	100	0	0	0	0	0	0
2300:	#	53	53	53	53	53	21	53	0	18	1	32	12	0
	%	100	100	100	100	100	40	100	0	34	2	60	23	0
3100:	#	53	86	59	63	62	10	68	24	5	10	34	18	8
	%	59	96	66	70	69	11	76	27	6	11	38	20	9
3104:	#	6	6	5	6	8	1	6	2	1	1	2	3	0
	%	75	75	63	75	100	13	75	25	13	13	25	38	0
5100:	#	32	38	34	29	30	1	20	6	6	4	29	17	0
	%	80	95	85	73	75	3	50	15	15	10	73	43	0
510-:	#	6	6	6	6	6	1	5	1	0	0	5	3	0
	%	100	100	100	100	100	17	83	17	0	0	83	50	0

b. Comparison of Billet Skills and Rank

Eight clear skill patterns appear to exist when considering billet skills within the context of the military rank identifier.

- There is an increasing need for Budget Analysis Skills (S1) as rank increases.
- There is a very high and fairly consistent need for Financial Policy/Advisory Skills (S2) at all four rank levels.
- There is an increasing need for Budget Formulation Skills (S3) as rank increases.
- There is an increasing need for DoN Budgetary Knowledge Skills (S5) as rank increases.
- There is an increasing need for PPBS Skills (S6) as rank increases.
- Although there is a limited overall frequency of need for Contract Administration Skills (S9), there is an increasing need for this skill as rank increases.
- Although there is a limited overall frequency of need for Financial Reporting Skills (S10), there is an increasing need for this skill as rank increases.
- Although there is a limited overall frequency of need for Auditing Skills (S12), there is an increasing need for this skill as rank decreases.

c. Comparison of Billet Skills and Subspecialty Code

There were six skill patterns that appeared to exist when considering billet skills within the context of P or Q coded billet distinction. Because there are only two levels within this identifier category, an arbitrary assumption was made that a skill pattern was said to exist if

the percentage difference between the P and Q code levels was greater than fifteen percentage points.

- Q coded billets have a greater need for Budget Analysis Skills (S1) than P coded billets.
- Q coded billets have a greater need for Budget Execution Skills (S4) than P coded billets.
- Q coded billets have a greater need for PPBS Skills (S6) than P coded billets.
- Q coded billets have a greater need for Contract Administration Skills (S9) than P coded billets.
- P coded billets have a greater need for Supervisory Skills (S11) than Q coded billets.
- P coded billets have a greater need for Auditing Skills (S12) than Q coded billets.

d. Comparison of Billet Skills and Designator

An examination of skill need patterns within the designator identifier category was not conducted. Although there is a hierarchy that exists in terms of military status among officer designator categories, which ranges from the unrestricted line officer communities down to the various staff corps officer communities, there is no continuous progression from one designator to another as there is within the other identifier category levels. A recommendation for further study in this area can be found in Chapter V.

2. Observed Dependent/Independent Relationships Between Billet Skills and Identifier Categories

The analysis and resultant findings presented in this subsection were derived statistically through utilization of

chi-square distribution analysis. A chi-square test is designed to determine whether two variables are independent or whether there is some significant dependent relationship between them. Formally, the chi-square technique tests an hypothesis regarding a significant relationship between the variables of interest. Conventionally, this hypothesis is stated in the null form, that is, that the variables are independent; there is no significant relationship between them. For this analysis, the null hypothesis (H_0) was stated as follows:

- H_0 : The requirement for a particular billet skill is independent of a particular identifier category.

Essentially the same hypothesis may be stated in the alternative form, that is, that a significant dependent relationship does exist between the variables, thus:

- H_1 : The requirement for a particular billet skill is dependent upon a particular identifier category.

Obviously, if the results of the chi-square test indicate that the null hypothesis is rejected, the alternative hypothesis is, therefore, accepted; and vice versa.

First, a level of significance to be used in the chi-square test was determined. The level of significance is defined as the maximum probability that will be tolerated in the hypothesis testing procedure of erroneously rejecting a null hypothesis (H_0) when it is in fact true, and thus erroneously accepting an alternative hypothesis (H_1). This erroneous rejection is referred to as a "Type I error" in

statistical parlance. The level of significance used in the testing for this study was set at 0.1. This means that, for testing purposes, there is a 10% probability of an erroneous accept/reject decision regarding the null hypothesis. This also means that there is a 90% probability that the decision is correct. Then, the chi-square test was performed to determine whether a significant relationship existed between the billet skills need and the billets' identifier categories.

The chi-square distribution test findings were derived from a statistical comparison of each of the billet skills to the identifier categories. The test was added to the earlier SPSS program to yield contingency tables and chi-square values. A sample contingency table with a chi-square value is provided in Figure 4. Next, appropriate critical values were derived from a Pearson chi-square distribution table, using the appropriate degrees of freedom (DF in Figure 4) for each identifier category and a 0.1 level of significance. These critical values were then compared to the chi-square contingency table values generated for each skill and identifier category [Ref. 12]. This comparison determines acceptance or rejection of the null hypothesis regarding each instance of independence between billet skills and identifier categories. The null hypothesis was accepted whenever the chi-square value was smaller than its corresponding critical value. A summary of the findings derived from this analysis follows. The findings are presented by billet skill.

ECHELON COMMAND ECHELON by SI BUDGET ANALYSIS SKILLS

Page 1 of 1

		SI					
Count		I		YES		Row	
Row	Pct	IND					Total
		I	0	I	I	I	
<hr/>							
ECHELON		1	1	2	1	1	2
SECNAV/NAVCOMPT		1	100.0	1		1	.6
<hr/>							
		2	1	6	1	28	46
RESPONSIBLE OFFI		1	13.6	1	86.4	1	12.7
<hr/>							
		3	1	30	1	112	142
ADMINISTERING OP		1	21.1	1	78.9	1	41.3
<hr/>							
		4	1	1	1	8	9
SUB-CLAIMANT		1	11.1	1	88.9	1	2.6
<hr/>							
		5	1	28	1	120	148
FUND ADMIN ACTIV		1	18.9	1	81.1	1	42.8
<hr/>							
		6	1		1	1	1
COST CENTER		1		1	100.0	1	.3
<hr/>							
Column		67		279		346	
Total		19.4		88.6		100.0	

Chi-Square	Value	DF
Pearson	16.18491	9

Sample of a Contingency Table
with Chi-Square Value

Figure 4

- Budget Analysis Skills (S1): The need for this skill was dependent upon command echelon, rank, designator, and P/Q code distinction.
- Financial Policy/Advisory Skills (S2): The need for this skill was dependent upon command echelon, but was independent of rank, designator, and P/Q code distinction.
- Budget Formulation Skills (S3): The need for this skill was dependent upon all four identifier categories.
- Budget Execution Skills (S4): The need for this skill was dependent upon all four identifier categories.
- DoN Budgetary Knowledge Skills (S5): The need for this skill was independent of command echelon, but was dependent upon rank, designator, and P/Q code distinction.
- PPBS Skills (S6): The need for this skill was dependent upon all four identifier categories.
- Accounting Technical Skills (S7): The need for this skill was dependent upon command echelon, rank, and designator, but was independent of P/Q code distinction.
- Communication and Liaison Skills (S8): The need for this skill was dependent upon all four identifier categories.
- Contract Administration Skills (S9): The need for this skill was dependent upon all four identifier categories.
- Financial Reporting Skills (S10): The need for this skill was independent of command echelon and rank, but was dependent upon designator and P/Q code distinction.
- Supervisory Skills (S11): The need for this skill was independent of command echelon, but was dependent upon rank, designator, and P/Q code distinction.
- Auditing Skills (S12): The need for this was dependent upon command echelon, designator, and P/Q code distinction, but was independent of rank.
- Weapons System Acquisition Skills (S13): The need for this skill was independent of command echelon, rank, and P/Q code distinction, but was dependent upon designator.

Appendix C is a detailed summary of the chi-square distribution test results.

B. ANALYSIS OF FINANCIAL MANAGEMENT EDUCATIONAL SKILL REQUIREMENTS

This section examines the relationships between the financial management subspecialty's ESRs listed in Figure 2 of Chapter II, as set forth by N-82 as the primary subspecialty sponsor, and the thirteen billet skills presented and defined in Chapter III, Section A, Subsection 2. The subsidiary research question to be examined in this section will be to determine whether or not the ESRs adequately and appropriately reflect the Navy's financial management subspecialty billet requirements, as defined by the thirteen billet skills. In other words, do the ESRs adequately cover the most requested skills? First, each ESR will be presented. Then, the billet skills related to the applicable ESR will be laid out and accompanied by a short explanation as to why the related skill applies to that particular ESR.

ESR #1: A comprehensive understanding of all aspects of the DON budget cycle, including planning, programming and budget formulation and execution.

Related skills:

- Budget Analysis Skills (S1): Covers the ability to perform analysis of subordinate activity budget input submissions
- Financial Policy/Advisory Skills (S2): Covers the ability to draft policy and guidance regarding budget input submissions
- Budget Formulation Skills (S3): Covers the ability to convert programs into financial plans and budgets
- Budget Execution Skills (S4): Covers the ability to properly execute an activity's existing budget
- DoN Budgetary Knowledge Skills (S5): Covers knowledge of DoN budgeting terminology, budget cycle time lines, and key players
- PPBS Skills (S6): Covers knowledge DoD PPBS terminology, budget cycle time lines, key players, and documents

ESR #2: The ability to identify, analyze and prepare effective and economic program alternatives. An ability to prepare and evaluate cost estimates.

Related skills:

- Budget Analysis Skills (S1): Covers the ability to recognize and initiate optimum resource allocation and re-allocation situations
- Financial Policy/Advisory Skills (S2): Covers the ability to draft or prepare policy and guidance covering budget input submissions and re-submissions
- Budget Formulation Skills (S3): Covers the ability to translate program requirements, including alternatives, into financial plans
- Accounting Technical Skills (S7): Covers the ability to perform cost-benefit analysis and make-or-buy evaluations in comparing program options, alternatives, or trade-offs

ESR #3: The ability to manage and control funds, including appropriated, revolving and nonappropriated funds, to support approved programs.

Related skills:

- Financial Policy/Advisory Skills (S2): Covers the ability to draft policy and guidance regarding accounting procedures and financial resource utilization, management, and control
- Budget Execution Skills (S4): Covers the ability to control the execution of an existing and approved budget of funds
- DoN Budgetary Knowledge Skills (S5): Covers the ability to recognize differences between the various classes of funds within the DoN
- Accounting Technical Skills (S7): Covers the ability to acquire and utilize technical accounting knowledge in a wide variety of areas including, but not limited to, the accounting cycle and financial statement composition and analysis
- Financial Reporting Skills (S10): Covers the ability to develop financial summaries, statements, and reports for use as management and control tools by concerned parties internal and external to the reporting activity
- Auditing Skills (S12): Covers the ability to internally monitor the effectiveness of an activity's management and control of funds

ESR #4: The ability to develop and review financial reports and analyze budget execution against operating and financial plans, and to develop alternative plans based on analysis of an activity's financial performance. An ability to recommend or make management decisions regarding the reallocation or reprogramming of funds.

Related skills:

- Budget Analysis Skills (S1): Covers the ability to recognize and initiate optimum resource re-allocation
- Budget Execution Skills (S4): Covers the ability to recommend re-allocation of financial resources to alternative plans, reprogramming funds to other programs within an activity's existing budget, or to recommend pursuit of additional funding based upon anticipated funding shortfalls discovered through budget execution analysis
- Accounting Technical Skills (S7): Covers the ability to perform financial statement analysis
- Financial Reporting Skills (S10): Covers the ability to develop financial statements, summaries, and reports which support the budget execution of existing programs

ESR #5: A comprehensive knowledge of the principles of finance and business management, in both the public and private sectors, to support participation and leadership in the development, implementation and administration of fiscal policies, procedures, systems and controls to ensure the responsible use of available resources. This ESR is deliberately broad and all skills relate to it.

Related skills:

- Budget Analysis Skills (S1): Covers the ability to recognize and initiate optimum resource allocation
- Financial Policy/Advisory Skills (S2): Covers the ability to function as a financial advisor internal and external to the activity, as well as to be able to draft policy and guidance covering financial matters
- Budget Formulation Skills (S3): Covers the ability to develop financial plans and budgets which serve as tools for effective financial resource management

- Budget Execution Skills (S4): Covers the ability to implement and execute an existing budget to ensure proper utilization of monetary resources
- DoN Budgetary Knowledge Skills (S5): Covers the ability to effectively participate in the Navy budgeting process
- PPBS Skills (S6): Covers the ability to effectively participate in the DoD budgeting process
- Accounting Technical Skills (S7): Covers the ability to effectively apply DoD accounting principles and procedures
- Communications and Liaison Skills (S8): Covers the ability to effectively and credibly represent the activity in financial matters in dealings with internal and external concerned parties
- Contract Administration Skills (S9): Covers the ability to apply federal contract administration policies and procedures
- Financial Reporting Skills (S10): Covers the ability to develop clear and concise summaries and reports that accurately reflect the financial resource status and official position of the activity to higher activities
- Supervisory Skills (S11): Covers the use of effective supervisory management practices to ensure organizational participation, leadership, and optimum use of the available human resources in the organization
- Auditing Skills (S12): Covers the ability to effectively implement, monitor, and audit an activity's internal financial control systems to ensure responsible and legal utilization of funds
- Weapons System Acquisition Skills (S13): Covers the ability to understand the roles and the responsibilities of the business and financial manager (BFM) within the Navy weapons system acquisition program management organization

ESR #6: The ability to develop and use internal control and audit techniques to establish sound management controls and to evaluate financial reports and operating performance.

Related skills:

- Financial Reporting Skills (S10): Covers the ability to recognize adequate and properly presented financial reports in order to correctly judge the fairness of financial statements in presenting an organization's financial performance
- Supervisory Skills (S11): Covers the ability to properly assign trained audit personnel whose task is to adequately evaluate the accuracy of financial statements, an activity's internal control systems' effectiveness, and the activity's overall operating performance
- Auditing Skills (S12): Covers the ability to implement and monitor an activity's internal control systems, evaluate management controls, and to monitor proper preparation and maintenance of financial statements, records, and reports; includes knowledge of government auditing standards, and the organization and conduct of internal and external audits conducted by appropriate government agencies

ESR #7: The ability to determine the unit costs of outputs and to use such costs in the analysis of performance and the allocation of resources.

Related skill:

- Accounting Technical Skills (S7): Covers the use of the unit costing concept in material, labor, and overhead cost allocation, particularly within the DoD

ESR #8: An understanding of the acquisition process as it relates to procurement and development appropriations.

Related skills:

- DoN Budgetary Knowledge Skills (S5): Covers the procurement terminology, Congressional budget appropriations, and key players unique to the DoN
- PPBS Skills (S6): Covers the application of knowledge regarding how a proposed acquisition program progresses through the PPBS process and eventually becomes an approved program with a financial resource budget

- Weapons Systems Acquisition Skills (S13): Covers the ability to understand the DoD weapons system acquisition cycle from concept development with initial research and development funding to full scale production and procurement appropriation funding

ESR #9: An understanding of joint and maritime strategic planning.

Related skill:

- PPBS Skills (S6): Covers knowledge of the roles of threat assessment, strategy formulation, and the major players in the initial planning phase of PPBS

ESR #10: The ability to recognize issues of potential importance to the Navy, formulate a research program, perform the necessary research and report the results. Under this ESR, the subject and nature of the research program will determine which skills are relevant. Any and all of the skills have potential relevance.

Related skills:

- Budget Analysis Skills (S1): Covers the ability to provide in-depth review and analysis of Navy financial resource management and budgeting issues
- Financial Policy/Advisory Skills (S2): Covers the ability to obtain financial information, summarize the information, and report relevant findings in order to serve and function as a credible financial policy advisor to primary and subordinate commands
- Budget Formulation Skills (S3): Covers the ability to understand and examine the Navy's budget formulation processes
- Budget Execution Skills (S4): Covers the ability to examine and report on execution performance for past and present Navy budgets

- DoN Budgetary Knowledge Skills (S5): Covers the ability to apply a working knowledge of the Navy's budgeting process to examine budgeting issues of importance
- PPBS Skills (S6): Covers the ability to apply a working knowledge of the DoD budgeting process and framework to examine DoD-wide budgeting issues
- Accounting Technical Skills (S7): Covers the ability to apply basic accounting concepts, especially the concepts of cost-benefit and financial statement analysis, to the examination of Navy budget formulation procedures and budget execution performance, respectively
- Communications and Liaison Skills (S8): Covers the ability to research, prepare and present results related to budget or program matters using current techniques and presentation aids
- Contract Administration Skills (S9): Covers the ability to utilize a working knowledge of the DoD's contract administration and oversight functions in order to examine issues of importance in DoD contracting
- Financial Reporting Skills (S10): Covers the ability to develop clear and concise financial summaries, reports, or statements that support an activity's budget, program, and/or position
- Supervisory Skills (S11): Covers the ability to recognize and examine human resource management issues of importance
- Auditing Skills (S12): Covers the ability to examine and report on an activity's internal control system
- Weapons System Acquisition Skills (S13): Covers the ability to utilize a working knowledge of the weapons system acquisition cycle in order to examine and report on past, present, and future issues involving particular weapons acquisition programs or processes

Table IV provides a tabular summary of the ESR analysis in this section.

TABLE IV
SUMMARY OF BILLET SKILLS COVERED BY EACH ESR

ESR	S 1	S 2	S 3	S 4	S 5	S 6	S 7	S 8	S 9	S 1 0	S 1 1	S 1 2	S 1 3
1	x	x	x	x	x								
2	x		x				x						
3		x		x	x		x			x		x	
4	x			x			x			x			
5	x	x	x	x	x	x	x	x	x	x	x	x	x
6										x	x	x	
7							x						
8					x	x							x
9						x							
10	x	x	x	x	x	x	x	x	x	x	x	x	x

C. ANALYSIS OF THE NPS FINANCIAL MANAGEMENT CURRICULUM

This section provides a comparison of the core courses offered within the NPS Financial Management curriculum to the thirteen skills identified from the subspecialty billet justifications that have been utilized as the primary data for this study. The subsidiary research question that is examined in this section is whether the NPS Financial Management curriculum courses provide coverage of all the Navy's financial management subspecialty billets' requirements with regard to the skills most requested in billet justifications. In other words, given a skill, is there a course in the financial management core curriculum that covers it?

Each course is presented by its course number, its title, and by a brief description of the course's content. The description is primarily taken from the 1992 NPS Course Catalog [Ref. 13]. In many cases, the description has been embellished with information gleaned from academic course journals, which include applicable information such as course outlines and objectives, syllabus information, textbooks, other reading and writing assignments, and examinations.

Next, each course was examined for specific applicability of each of the thirteen billet skills that were drawn from examination of the billet justifications. In order for a skill to have applicability to a particular course, a fairly concrete example of the skill's application to the course's

content had to exist and lend itself to explanation. No effort was made to read look beyond either the course content or the definition of each skill as provided in Chapter III, Section A, Subsection 2, if a specific application of a skill to a course could not be found.

The core courses are presented in the order which a typical student takes them in the NPS Financial Management curriculum.

Course: MN 2150 Financial Accounting

Description: The course is a study of basic accounting concepts and standards. Specific topics include study of the accounting cycle, asset valuation, liabilities and capital structure, earnings measurement, cash flow analysis, and financial statement analysis.

Applicable skills:

- Accounting Technical Skills (S7): All of the above areas specifically apply to this skill.
- Financial Reporting Skills (S10): The course demonstrates how to develop standard financial statements.

Course: MN 2031 Economic Decision Making

Description: This course focuses on the methods of national income determination, the consumption function, the money multiplier, and the impact of federal government fiscal and monetary policies. The course includes analysis of individual economic decisions and their relation to attainment of market equilibrium.

Applicable Skill:

- None covered explicitly, although an understanding of federal fiscal policy is important in preparing and justifying budgets.

Course: MN 3333 Managerial Communication Skills

Description: The course provides students with the writing, speaking, listening, team management, and critical thinking skills required of them to be effective managers. Instruction concentrates on communication media selection strategies, writing informative and persuasive documents, giving effective presentations, managing team processes, and developing the communication competencies of subordinates through effective feedback. The course focuses on communication issues unique to DoD and the Navy and utilizes individual, group, and team work in the study of these issues.

Applicable skills:

- Financial Policy/Advisory Skills (S2): The course develops the students' ability to draft and implement effective policy and guidance in all areas including, but not limited to, financial matters.
- Communication and Liaison Skills (S8): The course gives students the opportunity to design and conduct clear and concise presentations on topics of the students' choosing. Students are presented with, and given an opportunity to use, the latest in effective presentation techniques and audio-visual aids.
- Supervisory Skills (S11): The course provides students with the opportunity to learn and use more effective techniques in the management of military and civilian personnel within the organizational team. Prior student experience is heavily drawn upon for discussion as well as case study.

Course: MA 2300 Mathematics for Management

Description: The course provides the mathematical basis for modern managerial tools and techniques with emphasis on military applications. It also presents elements of differential and integral calculus, including optimization problems, an introduction to matrix algebra, and solutions of linear systems of algebraic equations.

Applicable skill:

- Budget Analysis Skills (S1): The course teaches students the underlying methods of analysis necessary to initiate and solve resource optimization problems, particularly in the area of financial resource management.

Course: IS 0123 Computer Skills Development

Description: The course provides instruction in the use and operation of microcomputers with emphasis on applications in administrative sciences. It provides students exposure to pertinent software packages such as WordPerfect, for constructing written documents, and Lotus, for construction of budget spreadsheets and financial statements.

Applicable skills:

- Department of the Navy (DoN) Budgetary Knowledge Skills (S5): The course presents the Lotus software package which is the primary formatting tool for the actual construction of the Navy's budget.
- Communication and Liaison Skills (S8): The course presents students an opportunity to construct clear and concise microcomputer-based presentations including, but not limited to, budgetary and financial matters using current techniques such as computer generated graphics and Lotus-based spreadsheets.

- Financial Reporting Skills (S10): The course teaches students the microcomputer-based means by which to develop, draft, construct, and graphically present written financial summaries, statements, budgets, and reports.

Course: MN 3161 Management Accounting

Description: The course provides an introduction to cost determination systems including job order costing systems, overhead accounting, standard costs, and unit costing. Emphasis is on applications of financial data to planning, control, and decision making in government organizations. Topics covered include budgeting, flexible budgeting, variance analysis, budget performance measures, cost-volume-profit analysis, cost analysis for decision making, and capital budgeting.

Applicable skills:

- Budget Analysis Skills (S1): The course provides students with the tools needed for financial analysis and decision making, particularly in the area make-or-buy decisions in the analysis of budget input submissions. The course also presents analytical techniques such as variance analysis, used for decision making in financial resource allocations and in budget performance measurement.
- Budget Formulation Skills (S3): Students are presented concepts which provide the ability to translate financial decisions regarding a program or organization into financial plans which may comprise or be included into an activity's budget.
- Budget Execution Skills (S4): The course covers the measurement of budget execution performance through comparison of actual versus planned budgets using flexible budgeting and variance analysis techniques.
- Accounting Technical Skills (S7): Skills are developed in the areas of cost determination for and cost-benefit analysis of programs, make-or-buy decisions, and capital budgeting in Navy industrial activities.

- Financial Reporting Skills (S10): Students further develop knowledge in the usage of financial statements, summaries, and reports which support financial programs and their related budgets.

Course: MN 3140 Microeconomic Theory

Description: The course covers the allocation of resources, both financial and others, and the distribution of output. It presents financial resource allocation optimization problems, consumer and producer choice theory, and economic equilibrium analysis. Applications to public sector problems is emphasized.

Applicable skill:

- Budget Analysis Skills (S1): The student acquires the ability to solve resource allocation optimization problems within the context of constrained budgets.

Course: MN 3105 Organization and Management

Description: The course studies the elements of management in organizations facing a dynamic environment. Emphasis is on contemporary management principles and theories of decision making, leadership, planning and control, organizational structure and planned organizational change, and their systemic impacts on organizational effectiveness and adaptation. Extensive use is made of DoD cases involving the management of civilian and military personnel.

Applicable skill:

- Supervisory Skills (S11): The course teaches students the tools necessary to manage a dynamic organizational structure and to manage military and civilian personnel.

Course: OS 3101 Statistical Analysis for Management

Description: This is a specialized course covering the basic methods of probability and statistics with emphasis on managerial applications. It includes applications of various probability models, statistical inference, and regression analysis. It also includes various parametric statistical techniques such as significance testing, confidence intervals, point estimation, and tests of hypotheses.

Applicable skill:

- Weapons System Acquisition Skills (S13): The course teaches risk probability assessment techniques that are applicable within the weapons system acquisition and program management cycle.

Course: MN 4161 Management Control Systems

Description: A study of the structure and processes of financial resource management control in government and private sector organizations. Specific topics include the basic concepts of planning and control for financial resources, organization of the management control function, measurements of financial inputs and outputs, pricing of government services, programming, budgeting, accounting, and performance evaluation systems. Heavy emphasis is placed upon case study.

Applicable skills:

- Budget Analysis Skills (S1): The course examines corporate and military budget submissions via case study analysis.
- Financial Policy/Advisory Skills (S2): The course places emphasis on the management control aspects of budget policy, budget inputs and outputs, formulation guidance, and execution guidance.
- Budget Formulation Skills (S3): The course covers budget formulation by providing students the ability to understand the control process by which the federal government translates program requirements and financial constraints into budget inputs which are later converted into outputs or budgets.
- Budget Execution Skills (S4): The course places emphasis on proper management control in the execution of existing budgets. It also examines budget performance evaluation/measurement for actual versus planned budget execution.
- Accounting Technical Skills (S7): The course covers financial statement analysis through usage of techniques such as financial ratio analysis.
- Financial Reporting Skills (S10): The emphasis is placed upon development of reports, summaries, and financial statements which support management control and provide performance measurement of organizational budgets.

Course: MN 3172 Public Policy and Budgeting

Description: The course provides analysis of federal fiscal policy with emphasis on financial resource decision making for national defense programs at the DoD, executive, and congressional levels of government. The roles of the principal players in the budget process are defined. The executive and congressional budget processes are examined in great detail in order to provide an indication as to how the political, social, and economic objectives of the federal

government are implemented through fiscal policy. Budget formulation and execution strategies are evaluated in order to indicate the dynamics of executive and legislative branch competition over financial resource allocation priorities. Heavy emphasis is placed on the DoD PPBS process and its relation to the executive and legislative branches' budgeting processes.

Applicable skills:

- Financial Policy/Advisory Skills (S2): The course provides an insight into the policies which govern the federal budgeting process. It discusses the advisory roles and responsibilities of the key players in the process at all levels.
- PPBS Skills (S6): The course places heavy emphasis on the terminology and time lines within the DoD, Executive, and Legislative Branches' budgeting processes. It provides the student with a detailed knowledge of the key individuals, interest groups, committees, and other players within the national defense budget process.
- Budget Formulation Skills (S8): The course provides students the understanding as to how the federal budget is constructed from what are initially financially unconstrained plans to meet threats and national defense strategies, and how these plans are converted into programs that take limited financial resource and political considerations into account as they move toward inclusion into the national defense budget that is submitted by the President to, and ultimately acted upon by, Congress.

Course: MN 4162 Cost Accounting

Description: The course is a review of basic cost accounting procedures. It provides an in-depth study of cost accounting systems, the allocation of direct and indirect costs to cost objectives, activity based costing, and the special problems

of accounting for material, labor, and overhead costs. Specific attention is given to the objectives and substance of the Cost Accounting Standards (CAS) for negotiated federal procurement contracts. There is heavy emphasis on problem solving within the case study context.

Applicable skills:

- Financial Policy/Advisory Skills (S2): The course emphasizes an understanding of CASs' and their relationship to proper cost accounting procedures' applications to federal procurement contracts.
- Accounting Technical Skills (S7): The course provides students knowledge in the area of material, labor, and overhead cost allocation to federal contracts in accordance with CAS.
- Financial Reporting Skills (S10): The course covers the development of standard financial statements.
- Auditing Skills (S12): The course places emphasis upon developing the students' ability to examine records and reports related to federal procurement contracts for proper compliance with CAS.

Course: OS 3006 Operations Research for Management

Description: A survey of the problem solving techniques for operations research. Topics include decision theory, linear programming, models, project scheduling methods with particular emphasis upon PERT/CPM, inventory, queuing, and simulation.

Applicable skill:

- Weapons System Acquisition Skills (S13): The course is particularly pertinent when examining cost and scheduling considerations within the context of the weapons system acquisition cycle production phase.

Course: MN 3154 Financial Management in the Armed Forces

Description: The course is a review of financial management concepts and practices in the DoD with heavy emphasis on the Department of the Navy. It includes the detailed study of PPBS, Navy comptrollership, budget formulation and execution, and the Navy's accounting systems. It examines the Navy's budgeting and accounting hierarchy from headquarters level down to the field activity and cost center levels. The course also examines the various types of funds and appropriations and the budgeting for, usage of, and accounting for these financial resources within the Department of the Navy.

Applicable skills:

- **Budget Analysis Skills (S1):** The course examines how a Department of the Navy activity budget submission is analyzed at all levels of the budgeting hierarchy. It provides instruction and guidance on how the financial resource allocation process should work and how to recognize and rectify situations when problems are encountered.
- **Financial Policy/Advisory Skills (S2):** The course examines the advisory relationship between an activity's comptroller and commanding officer regarding financial matters. The course covers this skill in all areas including the role of the comptroller in drafting policy and providing budget input submission guidance, budget execution and accounting guidance, and decision making with regard to the optimal use of diminishing financial resources.
- **Budget Formulation Skills (S3):** The course places particularly heavy emphasis on the budget formulation input process at all budgeting hierarchy levels. This includes, but is not limited to, the application of PPBS at the headquarters level as well as the designing of an operating budget for a cost center.
- **Budget Execution Skills (S4):** The course examines fast versus slow spending appropriation accounts, the

apportionment process, and differences between budget authority and outlays. It also examines the timing considerations involved with the government's incurring of financial obligations within particular appropriations.

- DoN Budgetary Knowledge Skills (S5): The course provides particular emphasis on the Navy's roles, the major players, unique terminology, and time lines within PPBS. All are presented within the context of the various levels of the Navy's budgeting hierarchy.
- PPBS Skills (S6): The course provides heavy emphasis on PPBS. The various phases, key documents, individuals, and groups involved in the genesis of the Navy budget from a group of ideas to final approval as a concrete budget are presented.
- Financial Reporting Skills (S10): The major funding and reporting documents and statements that are utilized in the financial management of resources within the Navy are presented in this course. All are presented from both the perspective of the activity that prepares these documents and from the user activity that receives these reports.
- Supervisory Skills (S11): The course provides students with guidance for getting effective budget inputs from personnel and groups within an activity, particularly inputs from cost centers. It places great emphasis upon the legal obligations in accounting for government funds that all responsible and accountable personnel within an organization must live with. It also provides advice on ways to develop and ensure good relationships between an activity's comptroller and commanding officer with regard to the management of financial resources.
- Auditing Skills (S12): The course presents detailed guidelines for the effective control, maintenance, internal audit, and preparation for external audit of an activity's financial records, statement, and reports.

Course: MN 4145 Policy Analysis

Description: The course examines the application of microeconomic methods to market and non-market transactions. It examines life cycle cost models, cost effectiveness, cost benefit, and resource optimization models.

Applicable skills:

- Budget Analysis Skills (S1): The course examines financial resource budget constraints and their application to optimization of limited resource allocation.
- Accounting Technical Skills (S7): Students are exposed to the concept of cost-benefit analysis, particularly within the context of the microeconomic concepts of marginal benefit/utility versus marginal cost.
- Contract Administration Skills (S9): The course presents sealed bidding methods and related strategies such as second price sealed bidding, and the Baron-Myerson and Loeb-Magat mechanisms.

Course: IS 3183 Management Information Systems

Description: The course is a study of what an information system is, how the computer and other resources fit into the system, and management considerations involved in computer-based information and telecommunications systems.

Applicable skill:

- Communications and Liaison Skills (S8): The course examines the various computer-based telecommunications media available to activities and individual users in order for them to provide information to other interested individuals and activities internal or external to the organization. Concepts presented include, but are not limited to, local and wide area networks, information packet switching networks, and managerial decision support systems.

Course: MN 4151 Internal Control and Auditing

Description: The study of the objectives and techniques of internal control systems and of audits of financial reports and records. Specific topics include the internal control structure and evaluation of internal control, audit reports,

government auditing standards, audit evidence and auditing tests, the auditor's decision process, statistical sampling, and special controls and audit problems in computer-based systems. Audits of several transaction cycles are examined.

Applicable skill:

- Auditing Skills (S12): The course examines the effectiveness of the implementation, monitoring, and management of an activity's internal financial control systems. It presents a comprehensive overview of the auditing function in both the public and private sector.

Course: NS 3252 Joint and Maritime Strategic Planning

Description: The course concentrates on identifying the key warfare issues for successful accomplishment of the Navy's missions. The evolution of threats is examined in the context of past, present, and future U.S. defense strategy. It also examines the roles of the individual military services, the DoD policy making process, and joint strategic planning for acquisitions and operations.

Applicable skill:

- PPBS Skills (S6): The course examines the historical evolution of the PPBS process and provides a working knowledge of it including applicable terminology, time lines, and key players. It examines the process within the DoD joint service acquisition and operational worlds and how it progresses from threat assessment, to strategy development, to the development of requirements to carry out the strategy, to the programming of requirements into a package of weapons or non-weapons systems, and to the final conversion of these systems into fiscally constrained budgets.
- Weapons System Acquisition Skills (S13): The course reviews the major players in the weapons system acquisition process from a historical perspective.

Course: MN 3301 Systems Acquisition and Project Management

Description: The course provides an understanding of the underlying philosophies and concepts of DoD weapons systems acquisition and the practical application of project management methods within this process. Topics include the evolution and current state of systems acquisition management, the defense systems acquisition cycle including milestones and phases, user-producer acquisition management disciplines and activities, project management, planning, organizational staffing, directing and controlling, and, acquisition and contracting terminology.

Applicable skills:

- PPBS Skills (S6): The course examines the progression of a proposed weapons system project through the PPBS process as it evolves into an approved and funded program with a budget of financial resources.
- Accounting Technical Skills (S7): The course examines the considerations and choices of the government and primary contractors in make-or-buy decisions, specifically with reference to government furnished equipment (GFE) purchased by the government from subcontractors and provided to primary contractors.
- Contract Administration Skills (S9): The course specifically addresses acquisition program contracting administration procedures and regulations in accordance with DODINST 5000.2M. It also presents contract types, contract solicitation methods, and discusses contract negotiation and award considerations.
- Financial Reporting Skills (S10): The course places specific emphasis on program support statements and summaries including, but not limited to, Accounting Data Sheet preparation by a program's business and financial manager for inclusion into a system procurement request, and basic reports related to the financial management of a DoD weapons system acquisition program.

- Weapons System Acquisition Skills (S13): The course specifically addresses this skill in all areas and in great depth.

Course: MN 4105 Strategic Management Policy

Description: The course is the study and analysis of complex managerial situations requiring comprehensive integrated decision making. Topics include operational and strategic planning, policy formulation, executive control, environmental adaptation, and management of change. Particular attention is given to strategic management in the military context and to the specific challenges found in the DoD and DoN organizational culture.

Applicable skills:

- Financial Policy/Advisory Skills (S2): The course places particular emphasis on the ability to establish and enforce policy and guidance related to financial resource allocation decision making within a complex military environment.
- Supervisory Skills (S11): The course provides students with the ability to conduct analysis of executive control over human resources in complex organizations.

Table V provides a tabular summary of the analysis of the NPS Financial Management curriculum in relation to the thirteen billet skills.

This chapter provided analyses and findings, both statistically and nonstatistically derived, from an examination of the P and Q coded billet structure within the context of the identifier categories. In addition, it examined the adequacy of coverage that the financial

management ESRs and the NPS financial management curriculum provide regarding the financial management skill requirements of the Navy as delineated by the thirteen billet skills. Chapter V presents logical and objective conclusions regarding these findings and also presents recommendations for further study.

TABLE V

SUMMARY OF BILLET SKILLS COVERED BY EACH
NPS FINANCIAL MANAGEMENT CORE CURRICULUM COURSE

COURSE	S 1	S 2	S 3	S 4	S 5	S 6	S 7	S 8	S 9	S 10	S 11	S 12	S 13
MN 2150							x			x			
MN 2031													
MN 3333		x						x			x		
MA 2300	x												
IS 0123					x			x		x			
MN 3161	x		x	x			x			x			
MN 3140	x												
MN 3105											x		
OS 3101													x
MN 4161	x	x	x	x			x			x			
MN 3172		x				x		x					
MN 4162		x					x			x		x	
OS 3006													x
MN 3154	x	x	x	x	x	x				x	x	x	
MN 4145	x						x		x				
IS 3183								x					
MN 4151												x	
NS 3252						x							x
MN 3301						x	x		x	x			x
MN 4105		x									x		

V. CONCLUSIONS AND RECOMMENDATIONS

A. SUMMARY AND CONCLUSIONS

There is a set of fairly broad, but definable, skill requirements observable in the population of Navy financial management subspecialty (XX31) Master's degree level coded (P or Q coded) billet justifications. These requirements are the thirteen billet skills defined in Chapter III, Section A, Subsection 2.

Some patterns were observed in the percentages of billets requiring specific skills within each of the identifier categories (excluding the designator categories). Some of these were consistent across identifiers. For example, PPBS Skills (S6) were required more often at higher echelons, at higher ranks, and in Q coded billets. Conversely, Auditing Skills (S12) were required more often at lower echelons, at lower ranks, and in P coded billets. None of these patterns was tested for statistical significance, however. All of the observed patterns are described in Chapter IV, Section A, Subsection 1.

The chi-square technique was used to test for statistically significant relationships between the thirteen billet skills and the four billet identifiers. Thus, a total of fifty-two potential relationships were tested. The results

showed that there was a significant relationship in forty of these cases and none in the other twelve. Ten of the thirteen skill (all but the Financial Policy/Advisory, Financial Reporting, and Weapons System Acquisition Skills) are significantly related to three or four of the identifier categories.

By comparing the Financial Management subspecialty's Educational Skill Requirements (ESRs) to the thirteen billet skills, it can be concluded that the ESRs adequately and appropriately reflect the Navy's financial management subspecialty billet requirements. Each ESR is applicable to one or more of the billet skills and each billet skill is covered by at least one ESR.

Comparing the Naval Postgraduate School's financial management curriculum courses to the thirteen billet skills indicates that the curriculum provides adequate coverage of all of the Navy's financial management subspecialty billet requirements as delineated by the thirteen billet skills. Each skill is covered by one or more of the courses in the curriculum. All but one of the courses relate to one or more of the billet skills in some fashion.

Numerous readings of the 346 billet justification write-ups that were used as the data source for this study led to two other conclusions. First, not every activity that submitted billet justifications to the FY 92 SRB used the most current version of the justification form. The most current

version was presented earlier in Figure 1. It is a standard form with explicit and detailed instructions for completion on the reverse side. Second, not every activity using the most current form fully completed the justification in accordance with the instructions. Some justifications were thoroughly filled out in great detail. Others were filled out in a more cursory and less detailed fashion. The compilation of the billet skills was made easy when the forms provided more detail.

B. RECOMMENDATIONS

It is possible for similar studies of other Navy subspecialties to be conducted using essentially the same SPSS computer model, the same study structure, and the same written format as utilized in this study.

The structure of the SPSS program model used in this study also allows for the possibility of further and more detailed study into the financial management subspecialty. The program is structured so that nearly a thousand iterations or data combinations are possible. For example, the skill needs for all Supply Corps Commanders who occupy Q coded billets at the responsible office level or the skill needs for all Unrestricted Line Lieutenant Commanders who occupy P coded comptroller billets could be determined.

The findings with respect to the comparison between billet skills and the designator identifier are not as consistent

with conventional wisdom as those found in the cases of the other three identifiers. A more in depth study is recommended to examine/analyze differences, for example, between unrestricted line and staff corps designators, or among all line only or all staff only.

A "follow-up" type of study could be conducted to examine the success of NPS financial management graduates. This study examined the "before" aspect of financial management subspecialty education. It in no way attempts to examine the prospects for professional success in the subspecialty, given this education. A follow-up study could be conducted in order to examine the "after" aspect of financial management subspecialty education. One way may be to conduct a survey of subspecialty billet incumbents who are NPS financial management program graduates and are serving in approved P or Q coded billets during a particular time period. This survey could examine, at a minimum, the utility of the NPS financial management curriculum courses to the billet incumbent and his/her duties.

APPENDIX A

<u>BSC</u>	<u>BILLET TITLE</u>
11180	Financial Management Officer-Budget Evaluation Group Assistant for Administration, Under Secretary of the Navy (AAUNSECNAV), Washington, DC
10750	Special Assistant for Administration/Finance AAUNSECNAV, Washington, DC
13140	Financial Management Officer for Research, Development, Testing, and Evaluation (RDT&E) AAUNSENAV, Washington, DC
13160	Financial Management Officer for Other Procurement-Navy (OPN) Appropriation AAUNSECNAV, Washington, DC
14010	Deputy Director, Financial Control Division AAUNSECNAV, Washington, DC
12220	Assistant for Reserve Matters NCBR Department of the Navy OFF/RPN, Washington, DC
13120	Financial Management Officer for Military Construction (MILCON) AAUNSECNAV, Washington, DC
13100	Financial Management Officer for Aircraft Procurement- Navy (APN) Appropriation AAUNSECNAV, Washington, DC
12260	Financial Management Officer for Ship Operations and Programs AAUNSECNAV, Washington, DC
12250	Financial Management Officer for Navy Industrial Fund (NIF) AAUNSECNAV, Washington, DC
12230	Navy Stock Fund (NSF) Section Head AAUNSECNAV, Washington, DC
12150	Financial Management Officer for Base Operations AAUNSECNAV, Washington, DC
42200	Real Property Maintenance Activities Project Manager Office of the Chief of Naval Education and Training, Pensacola, FL

00300 Executive Officer-Public Works Center
San Diego, CA

00500 Executive Officer-Public Works Center
Naval Base Guam

00200 Executive Officer-Public Works Center
Naval Base Norfolk, VA

30200 Equipment Management Department Head
Naval Construction Battalion Center, Port Hueneme, CA

40650 Business and Financial Manager
Naval Air Systems Command, Washington, DC

47250 Business and Financial Manager
Naval Air Systems Command, Washington, DC

00600 Budget Officer
Fleet Aviation Specialized Operational Training Group-
Pacific Ship Training Detachment
San Diego, CA

01320 Assistant Director, Programming and Budget Division
Naval Supply Systems Command, Washington, DC

01330 Budget Officer-Navy Stock Fund
Naval Supply Systems Command, Washington, DC

01400 Director, Operational Accounting Division
Naval Supply Systems Command, Washington, DC

01200 Director, Programming and Budget Division
Naval Supply Systems Command, Washington, DC

05400 Director, Transportation Budget Division
Naval Supply Systems Command, Washington, DC

40100 Staff Supply Officer and Control Division Head
Naval Oceanographic Systems Command-Pacific, Pearl
Harbor, HI

41000 Director, Material Accounting Division
Navy Aviation Supply Office, Philadelphia, PA

67100 Associate Chairman of Economics Department
U.S. Naval Academy, Annapolis, MD

00200 Executive Officer-Public Works Center
San Francisco, CA

00200 Executive Officer-Public Works Center
Yokosuka, Japan

01130 Logistics Analysis Section Head (OP-801E)
Office of the Chief of Naval Operations, Washington, DC

00200 Executive Officer-Public Works Center
Naval Air Station Pensacola, FL

01300 Program Coordination and Evaluation Branch Head
Naval Space Command, Washington, DC

51200 Assistant Public Works Officer
Commander, Fleet Activity, Sasebo, Japan

10785 Assistant for Appraisal of Logistics Plans, Programs,
Budget and Manpower/Training Division (OP-04JC)
Office of the Chief of Naval Operations, Washington, DC

72161 Reserve Personnel Management Branch Head (OP-959C)
Office of the Chief of Naval Operations, Washington, DC

06060 Reserve Personnel-Navy (RPN) Analyst (OP-120C3)
Office of the Chief of Naval Operations, Washington, DC

72171 Operation and Maintenance-Navy (OPN) Reserve Management
Branch Head (OP-959D)
Office of the Chief of Naval Operations, Washington, DC

11186 RAF Programs and U.S. Flag Fleet Readiness (OP-423C)
Office of the Chief of Naval Operations, Washington, DC

06074 Program and Manpower Analyst (OP-120C6)
Office of the Chief of Naval Operations, Washington, DC

70020 FIS-RMS-ACOS (N7)
Office of the Chief of Naval Technical Training, Memphis,
TN

70060 Budgeting Branch Head (N71)
Office of the Chief of Naval Technical Training, Memphis,
TN

00300 Contracts/Trainer Software Support Activity/COMS/APN-6
Funds Manager (PMA205-4A)
Naval Air Systems Command Detachment-Aviation Training
Systems, Orlando, FL

05220 Business and Financial Manager
Aegis Program Office, Washington, DC

37730 Business Manager/Business Administrator (PMS377E)
Naval Sea Systems Command, Washington, DC

04100 Director, Training Department
Naval Air Technical Training Center Lakehurst, NJ

00300 Flag Secretary
Commander, Cruiser-Destroyer Group ONE

63220 Fiscal/Budget Requirements Branch Head
Bureau of Naval Medicine, Washington, DC

09200 Associate Director for Plans, Budget, and Administration
U.S. Naval Academy, Annapolis, MD

10010 Commanding Officer, Naval Reserve Financial Information
Processing
New Orleans, LA

10030 Executive Officer, Naval Reserve Financial Information
Processing
New Orleans, LA

00200 Executive Officer, Public Works Center
NTC Great Lakes, IL

13140 Applications Systems Analyst
Bureau of Naval Medicine, Washington, DC

13160 Developmental Systems Analyst
Bureau of Naval Medicine, Washington, DC

01610 Facilities Support Analyst (OP-814H)
Office of the Chief of Naval Operations, Washington, DC

24020 Deputy Financial Controller
Supreme Allied Commander-Atlantic, Norfolk, VA

01700 Inventory Accuracy Officer
Ships Parts Control Center, Mechanicsburg, PA

02700 Assistant Public Works Officer
Naval Station Mayport, FL

04010 Assistant Public Works Officer
Naval Shipyard Philadelphia, PA

02130 Assistant for Plans and Programs (G80P)
Commander, Naval Security Group, Washington, DC

04010 Assistant Public Works Officer
Norfolk Naval Shipyard, Portsmouth, VA

00300	Executive Officer-Public Works Center Naval Base Subic Bay, RP
00300	Executive Officer-Public Works Center Naval Base Pearl Harbor, HI
00500	Executive Officer-Public Works Center Naval Base Guam
32350	Business and Financial Manager Naval Air Systems Command, Washington, DC
00200	Executive Officer-Public Works Center Naval Base Norfolk, VA
09640	Internal Review Analyst Bureau of Naval Medicine, Washington, DC
02030	POM Officer-Facility Planning and Programming Naval Facilities Engineering Command, Alexandria, VA
11120	Deputy Director/Medical Bureau of Naval Medicine, Washington, DC
14120	Fiduciary Branch Head Bureau of Naval Medicine, Washington, DC
13260	Applications System Analyst Bureau of Naval Medicine, Washington, DC
11240	Deputy Director/Medical Bureau of Naval Medicine, Washington, DC
11320	Special Programs Branch Head Bureau of Naval Medicine, Washington, DC
13040	Developmental Systems Analyst Bureau of Naval Medicine, Washington, DC
13120	Systems Analyst Bureau of Naval Medicine, Washington, DC
65210	Budget Appropriation Coordination Branch Head Office of the Assistant Secretary of the Navy (Research, Development, and Acquisition), Washington, DC
65030	Director, Resources and Evaluation Office of the Assistant Secretary of the Navy (Research, Development, and Acquisition), Washington, DC
10053	Special Assistant AAUNSECNAV, Washington, DC

72030 Assistant/Staff Officer for Reserve Matters
U.S. Department of the Navy-Staff Offices, Washington, DC

72050 Naval Reserve Analyst
U.S. Department of the Navy-Staff Offices, Washington, DC

60300 Branch Head
Office of the Naval Inspector General, Washington, DC

91230 Integrated Logistics Support Division Head/Staff Supply
Officer
Naval Sea Systems Command, Washington, DC

91080 Assistant Program Manager
Naval Sea Systems Command, Washington, DC

91230 Business/Finance Management Division Head
Naval Sea Systems Command, Washington, DC

00380 Resource Analysis and Financial Report Officer
Commander-in-Chief U.S. Atlantic Fleet, Norfolk, VA

04500 Assistant Chief of Staff for Resources Management
Commander, Naval Training Command-Atlantic, Norfolk, VA

00100 Commanding Officer
Fleet Accounting and Disbursing Center-Atlantic, Norfolk,
VA

10500 Program Objective Memorandum (POM) and Navy Training Plan
(NTP) Coordinator
Commander, Naval Surface Reserve Force, New Orleans, LA

09200 Assistant Public Works Officer
Marine Corps Air Station, Iwakuni, Japan

03200 Assistant Public Works Officer
Marine Corps Air Station El Toro, CA

02300 Assistant Public Works Officer
Marine Corps Base Camp Pendleton, CA

05800 Budget and Fiscal Planning Officer
Division of Naval Reactors, Washington, DC

41200 Assistant Public Works Officer
Naval Support Activity, Naval District Washington, DC

05600 Logistics, Planning, and Fiscal Management Officer
Division of Naval Reactors, Washington, DC

07000 Director, Financial Systems Design and Procedures
Fleet Material Support Office, Mechanicsburg, PA

01300 Director, Navy Stock Fund Financial Division
Fleet Material Support Office, Mechanicsburg, PA

10750 Special Assistant for Administration/Finance
AAUNSECNAV, Washington, DC

11020 Assistant for Appropriations Matters
AAUNSECNAV, Washington, DC

11040 Assistant Congressional Liaison
AAUNSECNAV, Washington, DC

12150 Financial Management/Base Operations Officer
AAUNSECNAV, Washington, DC

12230 Navy Stock Fund Section Head
AAUNSECNAV, Washington, DC

12250 Navy Industrial Fund Financial Management Officer
AAUNSECNAV, Washington, DC

12260 Financial Management Officer-Ship Operations and Programs
AAUNSECNAV, Washington, DC

13100 Financial Management Officer, Aircraft Procurement-Navy
(APN) Appropriation
AAUNSECNAV, Washington, DC

13120 Financial Management Officer, Military Construction
AAUNSECNAV, Washington, DC

13140 Financial Management Officer, Research, Development,
Testing and Evaluation (RDT&E)
AAUNSECNAV, Washington, DC

13160 Financial Management Officer, Other Procurement-Navy
(OPN) Appropriation
AAUNSECNAV, Washington, DC

40010 Executive Assistant
Office of the Assistant Secretary of the Navy for
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14010 Deputy Director, Financial Control Division
AAUNSECNAV, Washington, DC

11180 Financial Management Officer-Budget
AAUNSECNAV, Washington, DC

01900 FCM Professional Training Officer
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45913 Business and Financial Manager
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Office of the Chief of Naval Operations, Washington, DC

02020 Budget Division Chief
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MD

00910 Accounting/Financial Information Processing Center (FIPC)
Officer
National Naval Medical Center, Bethesda, MD

82180 Business and Financial Manager-Surface Ship Weapon
Systems
Program Executive Office, Cruise Missiles Project and
Unmanned Aerial Vehicles Joint Project, Washington, DC

04020 Facilities Construction/Services/Assistant Public Works
Officer
Naval Shipyard Long Beach, CA

01050 Associate Comptroller for Planning Combat Systems
Programs and for Financial Systems
Naval Sea Systems Command, Washington, DC

83400 Deputy for Business, Financial, and Resources Management
Naval Air Systems Command Project Management Office,
Washington, DC

01050 Associate Comptroller for Planning Combat Systems
Programs and for Financial Systems
Naval Sea Systems Command, Washington, DC

83400 Deputy for Business, Financial, and Resources Management
Naval Air Systems Command Project Management Office,
Washington, DC

50725 Business and Financial Manager
Naval Air Systems Command Project Management Office,
Washington, DC

72800 Deputy Program Manager, Business and Financial Management
Naval Air Systems Command Project Management Office,
Washington, DC

00000 Deputy Program Manager, Business and Financial Management
 Program Executive Officer, Anti Submarine Aircraft,
 Washington, DC

00015 Head of Programs and Budget (OP-330)
 Office of the Chief of Naval Operations, Washington, DC

00035 Operations and Maintenance-Navy (OMN) Appropriation
 Manager (OP-330E)
 Office of the Chief of Naval Operations, Washington, DC

00039 Weapons Procurement Navy (WPN) Appropriation Manager (OP-
 330D2)
 Office of the Chief of Naval Operations, Washington, DC

00025 CPN Appropriation Manager (OP-330C)
 Office of the Chief of Naval Operations, Washington, DC

00020 Program Objective Memorandum (POM) Coordinator (OP-330C)
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00200 Executive Officer Public Works Center
 San Francisco, CA

00200 Executive Officer Public Works Center
 Yokosuka, Japan

00200 Executive Officer Public Works Center
 Naval Air Station Pensacola, FL

00200 Executive Officer Public Works Center
 NTC Great Lakes, IL

75000 Flight Budget Director
 Commander, Naval Reserve Force, New Orleans, LA

00000 Executive Officer Public Works Center
 San Diego, CA

00200 Equipment Management Department Head
 Naval Construction Battalion Center, Port Hueneme, CA

11000 Surface Forces Program Budget Officer
 Commander, Naval Surface Reserve Force, New Orleans, LA

75700 Base Support Director
 Commander, Naval Reserve Force, New Orleans, LA

75900 Director, Reserve Personnel-Navy (RPN) Budget Division
 Commander, Naval Reserve Force, New Orleans, LA

00760 Budget Analyst
Commander, Naval Intelligence Command, Washington, DC

10010 Commanding Officer
Fleet Accounting and Disbursing Center-Pacific, San Diego, CA

70010 Assistant Chief of Staff for Financial Management
Commander, Naval Computer and Telecommunications Command, Washington, DC

46020 Business Administration/Head of Plans and Programs
Program Executive Office for Space, Communications, and Sensors, Washington, DC

80030 Business Administration/Director, Plans and Programs Office
Space and Naval Warfare (SPAWAR) Systems Command, Washington, DC

31110 Financial Policy and Accounting Branch Head
Commander-in-Chief, U.S. Pacific Fleet, Pearl Harbor, HI

80200 Assistant Public Works Officer
U.S. Naval Support Activity Naples, Italy

60030 Assistant Public Works Officer
Naval Air Station Sigonella, Sicily

04545 Fiscal/Finance Manager
Space and Naval Warfare Systems Command-Space Technology Programs, Washington, DC

05200 Planning and Programs Staff Officer
Commander, U.S. Naval Forces Central Command, Tampa, FL

05020 Resources Management Department Head
Naval Medical Data Service Center, Bethesda, MD

02611 Program Analyst
Office of the Chief of Naval Operations, Washington, DC

14460 Financial Analyst
Naval Medical Data Service Center, Bethesda, MD

90160 Internal Review Analyst
Bureau of Naval Medicine, Washington, DC

00927 Accounting/Health Cost Analyst
National Naval Medical Center, Bethesda, MD

90270 Internal Review Analyst
Bureau of Naval Medicine, Washington, DC

40060 Staff Material Officer
Commander, Naval Surface Force Pacific Fleet, San Diego,
CA

30730 Business and Financial Manager
Naval Sea Systems Command, Washington, DC

31236 Business and Financial Manager (PMS312F)
Naval Sea Systems Command, Washington, DC

72300 Financial Management Branch Head
Naval Military Personnel Command, Washington, DC

07070 RDT&E Appropriation Branch Head
Seawolf Submarine Program Manager, Washington, DC

04010 Facilities Construction/Services Officer/Assistant Public
Works Officer
Portsmouth Naval Shipyard, NH

10700 Business and Financial Manager
Program Executive Officer for Tactical Aircraft Programs,
Washington, DC

02640 Senior Consultant
Naval Audit Service Headquarters, Falls Church, VA

01125 Program and Resource Branch Head
Commander, Naval Security Group Headquarters, Washington,
DC

60400 Director, Financial Management and Support Services
Navy International Programs Office for Foreign Military
Sales, Washington, DC

04010 Assistant Public Works Officer
Charleston Naval Shipyard/Station, SC

00135 Medical Department Staff/Health Care Operations
Naval Audit Service Headquarters, Falls Church, VA

01050 Assistant for Plans, Programs, Budget, and Resources
Commander, Naval Security Group Headquarters, Washington,
DC

40010 General Supply Officer
Naval Oceanographic Office, Stennis Space Center, MS

80010 Supply/Fiscal Department Head
Fleet Numeric Oceanography Center, Monterey, CA

04010 Facilities Construction/Services Officer
Puget Sound Naval Shipyard, WA

04003 Facilities Construction/Services/Assistant Public Works
Officer
Mare Island Naval Shipyard, CA

72146 Plans and Manpower Program Branch Head (OP-958D)
Office of the Chief of Naval Operations, Washington, DC

07075 Assistant Programming and Budget Manager (OP-02M1)
Office of the Chief of Naval Operations, Washington, DC

07070 Assistant for Plans, Programs, and Budget (OP-02M)
Office of the Chief of Naval Operations, Washington, DC

12600 Assistant Deputy Program Manager for Business and
Financial Management
Program Executive Office, Tactical Aircraft Programs,
Washington, DC

36700 Deputy for Business and Financial Management
Program Executive Office, Air Anti-Submarine Warfare
Programs, Washington, DC

07982 Operations and Maintenance-Navy (OMN) Appropriation
Program Manager (OP-301F)
Office of the Chief of Naval Operations, Washington, DC

07978 Programs Coordinator (OP-301)
Office of the Chief of Naval Operations, Washington, DC

07994 Weapons Manager (OP-302W)
Office of the Chief of Naval Operations, Washington, DC

07990 Other Procurement-Navy (OPN) Appropriation Program
Manager
Office of the Chief of Naval Operations, Washington, DC

12040 Assistant Director, Public Works Department
Naval Education and Training Command, Newport, RI

14020 Director, Comptroller/Supply Department
Naval Education and Training Command, Newport, RI

03370 Fiscal Management Branch Head
Commander, Naval Military Personnel Command, Washington,
DC

03380 Enlisted Fiscal Manager
Commander, Naval Military Personnel Command, Washington,
DC

03390 Officer Fiscal Manager
Commander, Naval Military Personnel Command, Washington,
DC

31200 Deputy Program Manager for Business and Financial
Management
Naval Air Systems Command Project Management Office,
Washington, DC

42600 Deputy Program Manager for Business and Financial
Management
Naval Air Systems Command Project Management Office,
Washington, DC

49600 Deputy Program Manager for Business and Financial
Management
Naval Air Systems Command Project Management Office,
Washington, DC

48600 Deputy Program Manager for Business and Financial
Management
Naval Air Systems Command Project Management Office,
Washington, DC

05765 Assistant Education Resources Analyst (OP-117E21)
Office of the Chief of Naval Operations, Washington, DC

29750 Program Cost Analysis Officer
Naval Air Systems Command, Washington, DC

29550 Program Cost Analysis Officer
Naval Air Systems Command, Washington, DC

39688 Business and Financial Manager
Naval Sea Systems Command, Washington, DC

07050 Director of Business and Financial Management
Naval Sea Systems Command, Washington, DC

39385 Business and Financial Manager
Naval Sea Systems Command, Washington, DC

30300 Assistant Program Executive Officer for Business and
Financial Management
Program Executive Office, Air Anti-Submarine Warfare
Programs, Washington, DC

11400 Deputy Program Manager for Program Control
Program Executive Office for Tactical Aircraft Programs,
Washington, DC

12500 Deputy Program Manager, Business and Financial Manager
Program Executive Office for Tactical Aircraft Programs,
Washington, DC

04282 Director of Military Manpower Budget Development,
Costing, and Accounting
Commander, Naval Military Personnel Command, Washington,
DC

31410 Future Plans and Programs Head
Commander-in-Chief, U.S. Pacific Fleet, Pearl Harbor, HI

31420 POM Development Officer
Commander-in-Chief, U.S. Pacific Fleet, Pearl Harbor, HI

31430 Assistant Programs Officer
Commander-in-Chief, U.S. Pacific Fleet, Pearl Harbor, HI

09500 Contracts Liaison
Commander, Naval Surface Reserve Force, New Orleans, LA

14201 Comptroller
Naval Air Station Moffett Field, CA

08100 Comptroller
Naval Air Station Corpus Christi, TX

02010 Director of Programs and Comptroller
Naval Facilities Engineering Command, Alexandria, VA

28200 Comptroller
Naval Air Station Alameda, CA

28200 Comptroller
Naval Air Station Barbers Point, HI

04000 Comptroller
Naval Air Station North Island, CA

28200 Comptroller
Naval Air Station Whidbey Island, WA

01200 Comptroller
Naval Support Force Antarctica

01920 Assistant Comptroller
Commander, Naval Air Force-Pacific, San Diego, CA

00850	Comptroller Naval Supply Center, Puget Sound, WA
01641	Comptroller Naval Supply Center, San Diego, CA
03100	Comptroller Naval Supply Center, Jacksonville, FL
09010	Comptroller Submarine Base Pearl Harbor, HI
28020	Comptroller Commander, Medium Attack Tactical Electronic Warfare Wing-Pacific, NAS Whidbey Island, WA
01600	Comptroller Ships Parts Control Center, Mechanicsburg, PA
52000	Force Comptroller Commander, Naval Submarine Force-Pacific, Pearl Harbor, HI
20010	Comptroller Naval Air Station Cubi Point, RP
00510	Comptroller Naval Supply Center, Charleston, SC
00781	Deputy Comptroller Naval Ordnance Station, Louisville, KY
28200	Comptroller Naval Air Station Lemoore, CA
21500	Comptroller Naval Air Station Miramar, CA
04100	Comptroller Ship Repair Facility, Yokosuka, Japan
05400	Comptroller Ship Repair Facility, Subic Bay, RP
01050	Director, Budget and Accounting Division, Planning and Comptroller Department Naval Supply Depot, Subic Bay, RP
40050	Comptroller Navy Aviation Supply Office, Philadelphia, PA

00320	Comptroller Naval Aviation Depot, Alameda, CA
00310	Comptroller Fleet Combat Direction Systems Activity, Dam Neck, VA
04100	Comptroller Naval Aviation Depot, Pensacola, FL
00425	Comptroller Naval Air Station Norfolk, VA
80140	Comptroller Navy Environmental Health Center, Norfolk, VA
00907	Comptroller Naval Hospital Portsmouth, VA
00910	Comptroller Naval Hospital Bremerton, WA
00425	Comptroller Naval Air Station Norfolk, VA
38200	Assistant Dean of Faculty and Finances/Comptroller U.S. Naval Academy, Annapolis, MD
81180	Business and Financial Manager Program Executive Office, Cruise Missiles Project and Unmanned Aerial Vehicles Joint Project, Washington, DC
06000	Comptroller Naval Shipyard Long Beach, CA
00150	Comptroller Navy Center for Tactical Systems Interoperability, San Diego, CA
14020	Deputy Comptroller Bureau of Naval Medicine, Washington, DC
14700	Force Comptroller Commander, Naval Submarine Force-Atlantic, Norfolk, VA
04000	Comptroller Submarine Base New London, CT
07200	Comptroller U.S. Naval Academy, Annapolis, MD

00310	Comptroller Fleet Combat Direction Systems Activity, Dam Neck, VA
11100	Comptroller/District Supply Officer Naval District Washington, DC
01000	Director, Comptroller Department Fleet Material Support Office, Mechanicsburg, PA
00920	Comptroller National Naval Medical Center, Bethesda, MD
00080	Comptroller Naval International Logistics Command, Philadelphia, PA
38200	Assistant Dean for Faculty and Finances/Comptroller U.S. Naval Academy, Annapolis, MD
02010	Director of Programs and Comptroller Naval Facilities Engineering Command, Alexandria, VA
07030	Budget Officer Commander-in-Chief, U.S. Naval Forces-Europe, London, England
51000	Comptroller Naval Supply Depot, Yokosuka, Japan
70100	Comptroller Naval Support Activity, Naples, Italy
06510	Comptroller/Fiscal Officer Naval Air Station Sigonella, Sicily
06020	Comptroller/Fiscal Officer Naval Air Station Pensacola, FL
20200	Comptroller Naval Medical Research Institute, Bethesda, MD
40100	Comptroller Naval Medical Logistics Command, Ft. Detrick, MD
72000	Comptroller Commander, Naval Surface Force-Pacific, San Diego, CA
00922	Comptroller National Naval Medical Center, Bethesda, MD
00905	Comptroller Naval Branch Hospital, Sigonella, Sicily

06020 Comptroller/Head of Resources and Logistics
San Francisco Medical Command, Oakland, CA

00905 Comptroller
Naval Hospital, Rota, Spain

00920 Comptroller
U.S. Naval Observatory, Washington, DC

00920 Comptroller
Naval Supply Center, Oakland, CA

24240 Instructor-Business Administration
Naval Postgraduate School, Monterey, CA

00600 Instructor
Defense Resource Management Education Center, Monterey,
CA

04130 Instructor
Defense Systems Management College, Ft. Belvoir, VA

08500 Management Professor
Naval War College, Newport, RI

19500 Instructor/Logistics Head
Naval War College, Newport, RI

67200 Instructor-Economics
U.S. Naval Academy, Annapolis, MD

18200 Financial Management Instructor
Air Force Institute of Technology, Wright-Patterson AFB,
OH

00920 Instructor-Systems and Logistics
Air Force Institute of Technology, Wright-Patterson AFB,
OH

13040 Instructor
Naval School of Health Sciences (NSHS) Bethesda, MD

13080 Instructor-Fiscal and Supply Management
NSHS Bethesda, MD

00340 Fleet Comptroller
Commander-in-Chief U.S. Atlantic Fleet, Norfolk, VA

00340 Fleet Comptroller
Commander-in-Chief U.S. Atlantic Fleet, Norfolk, VA

00510	Comptroller Naval Postgraduate School, Monterey, CA
00820	Comptroller Health Sciences Education and Training Command, Bethesda, MD
00902	Comptroller Naval Hospital Portsmouth, VA
00905	Comptroller Naval Hospital San Diego, CA
00905	Comptroller National Naval Medical Center, Bethesda, MD
00905	Assistant Comptroller Naval Hospital Portsmouth, VA
01910	Force Comptroller Commander, Naval Air Force-Pacific, San Diego, CA
00905	Comptroller Naval Hospital Oakland, CA
06001	Comptroller Norfolk Naval Shipyard, VA
00910	Comptroller/Financial Management Naval Hospital San Diego, CA
06001	Comptroller Naval Shipyard Puget Sound, WA
00915	Comptroller National Naval Medical Center, Bethesda, MD
06001	Comptroller Naval Shipyard Portsmouth, NH
01500	Comptroller/Director, Logistics Division Navy Recruiting Command, Washington, DC
06002	Comptroller Naval Shipyard Pearl Harbor, HI
06001	Comptroller Mare Island Naval Shipyard, CA
06001	Comptroller Charleston Naval Shipyard, SC

07010 Force Comptroller
Commander-in-Chief, U.S. Naval Forces-Europe, London,
England

07100 Comptroller
Commander, Naval Base Norfolk, VA

07100 Comptroller
Commander, Naval Base Norfolk, VA

10040 Deputy Comptroller
Bureau of Naval Medicine, Washington, DC

10100 Comptroller
Naval Air Engineering Center, Lakehurst, NJ

10140 Deputy Comptroller
Bureau of Naval Medicine, Washington, DC

11010 Comptroller
Space and Warfare Command Headquarters, Washington, DC

24010 Financial Comptroller
Supreme Allied Commander-Atlantic, Norfolk, VA

11020 Comptroller
Naval Healthcare Support Office (HCSO) San Diego, CA

11020 Comptroller/Resources Head
HCSO London, England

11020 Comptroller
HCSO Barbers Point, HI

11020 Comptroller
HCSO Jacksonville, FL

11020 Comptroller
HCSO Norfolk, VA

22080 Project Officer/Comptroller
Naval School of Health Science, Bethesda, MD

31010 Fleet Comptroller
Commander-in-Chief, U.S. Pacific Fleet, Pearl Harbor, HI

10730 Assistant Director NCB/OP-82
AAUNSECNAV, Washington, DC

11010 Head of Appropriation Matters
AAUNSECNAV, Washington, DC

13030 Deputy Director of Investments and Development
AAUNSECNAV, Washington, DC

02609 Deputy Director of Resources
Office of the Chief of Naval Operations, Washington, DC

02610 Head of Resource Planning
Office of the Chief of Naval Operations, Washington, DC

11220 Head of Control Branch/Comptroller
Bureau of Naval Medicine, Washington, DC

72250 Director, Resource Management Division
Naval Military Personnel Command, Washington, DC

06380 Financial Manager (OP-136)
Office of the Chief of Naval Operations, Washington, DC

07974 Head of Surface Warfare Programs and Budget (OP-30)
Office of the Chief of Naval Operations, Washington, DC

05990 Shore Training and Education Resources Section Head (CP-117E)
Office of the Chief of Naval Operations, Washington, DC

06053 Manpower and Personnel Programs Head/Budget Analyst
Office of the Chief of Naval Operations, Washington, DC

60090 Director, Resource Management Office (Assistant for Management and Support)
Commander, Naval Military Personnel Command, Washington, DC

06051 Program Development and Coordination Branch Head
Office of the Chief of Naval Operations, Washington, DC

00370 Resource Management Officer
Commander-in-Chief, U.S. Atlantic Fleet, Norfolk, VA

02800 Financial Management Branch Head (OP-940E)
Office of the Chief of Naval Operations, Washington, DC

07070 Resource Planning Coordinator
Office of the Chief of Naval Air Training, Corpus Christi, TX

02105 Flight Program Development
Office of the Chief of Naval Air Training, Corpus Christi, TX

10730 Assistant Director NCB/OP-82
AAUNSECNAV, Washington, DC

11010 Head of Appropriation Matters
AAUNSECNAV, Washington, DC

13030 Deputy Director of Investments and Development
AAUNSECNAV, Washington, DC

93400 Director, Fleet Modification Program Management Division
(Comptroller)
Naval Sea Systems Command, Washington, DC

11020 Assistant for Execution Control
Bureau of Naval Medicine, Washington, DC

13020 Director, Fiscal Systems Division
Bureau of Naval Medicine, Washington, DC

50600 Director, Per Diem, Travel, and Transportation Allowance
Committee (PDTATAC) Staff
Special Boards and Committees, Per Diem, Travel and
Transportation Allowance Committee, Washington, DC

50700 Assistant Director, PDTATAC Staff
Special Boards and Committees, Per Diem, Travel and
Transportation Allowance Committee, Washington, DC

17550 Joint Chiefs of Staff Exercise Program Manager-Joint
Staff
Joint Chiefs of Staff, Washington, DC

72010 Program Manager for Weapons Systems/Programming Division
Head
Commander, Naval Computer and Telecommunications Command,
Washington, DC

05010 Operations Manager
Aegis Program Office, Washington, DC

72156 Director, Financial Management Division (OP-959)
Office of the Chief of Naval Operations, Washington, DC

00370 Resource Management Officer
Commander-in-Chief, U.S. Atlantic Fleet, Norfolk, VA

01020 Deputy Director, Management Support Division
Naval Space Command, Dahlgren, VA

11252 Program/Budget Coordinator Branch Head (OP-433)
Office of the Chief of Naval Operations, Washington, DC

06076 POM/Budget Coordination Section (OP-120D)
Office of the Chief of Naval Operations, Washington, DC

06078 Training Program/Budget Analysis Section Head
Office of the Chief of Naval Operations, Washington, DC

06204 Assistant for Military Personnel-Navy (MPN) Appropriation
Execution and Coordination (OP-13H)
Office of the Chief of Naval Operations, Washington, DC

APPENDIX B

	bic	echelon	subcat	desig	rank	code	s1	s2	s3	s4	s5	s6	s7	s8	s9	s10	s11	s12	s13
1	11180	3	a	1000	i	p	1	1	0	0	1	1	0	0	0	0	1	0	0
2	10750	3	a	1000	h	p	1	1	0	0	1	0	0	1	0	1	0	0	0
3	13140	3	a	5100	h	p	1	1	1	0	1	0	0	1	0	1	0	0	0
4	13160	3	a	1000	h	p	1	1	1	0	1	0	0	1	0	1	0	0	0
5	14010	3	a	3104	h	p	1	1	0	0	1	0	1	1	0	1	0	0	0
6	12220	2	a	1050	h	p	1	1	1	0	1	0	0	1	0	1	0	0	0
7	13120	3	a	5100	h	p	1	1	1	0	1	0	0	1	0	1	0	0	0
8	13100	3	a	1000	h	p	1	1	1	0	1	0	0	1	0	1	0	0	0
9	12260	3	a	1110	h	p	1	1	1	0	1	0	0	1	0	0	0	0	0
10	12250	3	a	1000	h	p	1	1	1	0	1	0	0	1	0	1	0	0	0
11	12230	2	a	3100	h	p	1	1	1	0	1	0	0	1	0	1	0	0	0
12	12150	3	a	5100	h	p	1	1	1	0	1	0	0	1	0	1	0	0	0
13	42200	3	a	5100	i	p	1	1	1	1	1	0	0	0	0	0	0	0	0
14	300	5	a	5104	g	p	1	1	1	1	1	0	1	0	0	0	1	1	0
15	500	5	a	5100	h	p	1	1	1	1	1	0	1	0	0	0	1	1	0
16	200	5	a	5104	g	p	1	1	1	1	1	0	1	0	0	0	1	1	0
17	30200	5	a	5100	i	p	1	1	1	1	1	0	1	0	0	1	1	1	0
18	40650	3	a	3100	i	p	1	1	1	1	1	0	0	0	0	0	0	0	0
19	47250	3	a	3100	h	p	1	1	1	1	1	0	0	0	0	1	0	0	0
20	600	5	a	1110	i	p	1	1	1	1	1	0	1	1	0	1	1	1	0
21	1320	3	a	3100	h	p	1	1	1	1	1	0	0	1	0	0	0	0	0
22	1330	3	a	3100	h	p	1	1	1	1	1	0	0	1	0	0	0	0	0
23	1400	3	a	3100	i	p	1	1	1	1	1	0	0	0	0	0	0	0	0
24	1200	3	a	3100	i	p	1	1	1	1	1	0	1	0	0	0	0	0	0
25	5400	3	a	3100	h	p	0	1	1	1	1	0	0	1	0	0	0	0	0
26	40100	5	a	3100	i	p	0	1	0	0	0	0	0	0	0	0	0	0	0
27	41000	5	a	3100	h	p	0	1	0	0	1	0	1	0	0	0	0	0	0
28	67100	5	c	1000	h	p	1	0	1	1	0	0	0	0	0	0	1	0	0
29	200	5	a	5100	h	p	1	1	1	1	0	0	1	0	0	0	1	1	0
30	200	5	a	5100	h	p	1	1	1	1	0	0	1	0	0	0	1	1	0
31	1130	2	a	3100	i	p	1	1	0	0	0	0	1	0	0	0	1	0	0
32	200	5	a	5100	h	p	1	1	1	1	1	1	1	0	0	0	0	0	0
33	1300	3	a	1000	i	p	1	1	1	1	1	1	1	0	0	0	1	0	0
34	61200	5	a	5100	i	p	1	1	1	1	1	0	1	0	0	0	1	1	0
35	10785	2	a	1000	h	p	0	1	1	0	1	0	0	0	0	0	1	0	0
36	72161	2	a	1000	h	p	1	1	1	1	1	0	1	0	0	0	1	0	0
37	5060	2	a	1000	i	p	1	1	1	1	1	0	0	0	0	0	0	0	0
38	72171	2	a	1000	h	p	1	1	1	1	1	0	1	0	0	0	1	0	0
39	11186	2	a	1050	i	p	1	1	1	1	0	0	0	1	0	0	0	0	0
40	5074	2	a	1000	i	p	1	1	1	1	0	0	1	0	0	0	0	0	0
41	70020	3	a	3104	g	p	1	1	1	1	1	0	1	0	0	0	0	0	0

	asc	echelon	subcat	desig	rank	code	s1	s2	s3	s4	s5	s6	s7	s8	s9	s10	s11	s12	s13
42	70060	3	a	3100	n	p	1	1	1	1	1	0	1	0	0	0	0	0	0
43	300	3	a	510	n	p	1	1	1	1	1	0	0	0	0	0	0	0	0
44	5220	3	a	1000	i	p	1	1	1	1	0	0	0	0	0	0	0	0	0
45	37730	3	a	3100	n	p	0	1	0	0	1	0	1	0	0	0	0	0	0
46	4100	5	a	1300	i	p	0	1	0	0	0	0	0	0	0	0	0	0	0
47	300	5	a	1110	i	p	1	1	1	1	0	0	1	0	0	0	0	0	0
48	63220	3	a	2300	i	p	1	1	1	1	1	0	1	0	0	0	1	0	0
49	9200	5	a	1000	i	p	1	1	1	1	1	0	0	0	0	0	1	0	0
50	10010	5	a	1000	n	p	0	1	0	0	0	0	1	1	0	0	1	0	0
51	10030	5	a	3100	i	p	0	1	0	0	0	0	1	1	0	0	1	0	0
52	200	5	a	5100	n	p	1	1	1	1	1	0	1	0	0	0	1	1	0
53	13140	3	a	2300	i	p	1	1	1	1	1	0	1	0	0	0	1	0	0
54	13160	3	a	2300	i	p	1	1	1	1	1	0	1	0	0	0	1	0	0
55	1610	2	a	5100	i	p	0	1	0	0	0	0	0	0	0	0	0	0	0
56	24020	3	a	3100	n	p	1	1	1	1	1	0	1	1	0	0	1	0	0
57	1700	5	a	3100	i	p	0	1	0	0	0	0	1	0	0	0	1	1	0
58	2709	5	a	5100	i	p	1	1	1	1	1	0	1	0	0	0	1	1	0
59	4010	5	a	5100	i	p	1	1	1	1	1	0	1	0	0	0	1	0	0
60	2130	3	a	1610	i	p	1	1	1	1	1	1	0	0	0	0	1	0	0
61	4010	5	a	5100	n	p	1	1	1	1	1	0	1	0	0	0	1	1	0
62	300	5	a	5100	n	p	1	1	1	1	1	0	1	0	0	0	1	1	0
63	300	5	a	5100	n	p	1	1	1	1	1	0	1	0	0	0	1	1	0
64	500	5	a	5100	n	p	1	1	1	1	1	0	1	0	0	0	1	1	0
65	32350	3	a	3100	n	p	1	1	1	1	1	0	1	0	0	0	1	0	0
66	200	5	a	5104	g	p	1	1	1	1	1	0	1	0	0	0	1	0	0
67	9640	3	a	2300	n	p	1	1	1	1	1	0	1	0	0	0	1	0	0
68	2030	3	a	5100	n	p	1	1	1	1	1	0	1	0	0	0	1	1	0
69	11120	3	a	2300	g	p	1	1	1	1	1	0	1	0	0	0	1	0	0
70	14120	3	a	2300	i	p	1	1	1	1	1	0	1	0	0	0	1	0	0
71	13260	3	a	2300	i	p	1	1	1	1	1	0	1	0	0	0	1	0	0
72	11240	3	a	2300	i	p	1	1	1	1	1	0	1	0	0	0	1	0	0
73	11320	3	a	2300	i	p	1	1	1	1	1	0	1	0	0	0	1	0	0
74	13040	3	a	2300	i	p	1	1	1	1	1	0	1	0	0	0	1	0	0
75	13120	3	a	2300	i	p	1	1	1	1	1	0	1	0	0	0	1	0	0
76	65210	2	a	1000	n	p	1	1	1	1	1	0	1	0	0	0	1	0	0
77	55030	2	a	1000	g	p	1	1	1	1	1	0	1	0	0	0	1	0	0
78	10053	3	a	1000	i	p	0	1	0	0	1	0	0	0	0	0	1	0	0
79	72030	2	a	1000	n	p	1	1	1	1	1	0	1	1	0	0	1	0	0
80	72050	2	a	1000	i	p	1	1	1	1	1	0	1	1	0	0	1	0	0
81	60300	1	a	1050	n	p	0	0	0	0	1	0	0	1	0	0	1	0	0
82	91230	3	a	3100	n	p	1	1	1	1	1	0	1	0	0	0	1	0	0

	disc	section	subcat	desig	rank	code	11	12	13	14	15	16	17	18	19	20	21	22	23
33	91080	3	a	3100	i	p	1	1	1	1	1	0	1	0	0	0	1	0	0
34	91230	3	a	3100	h	p	1	1	1	1	1	0	1	0	0	0	1	0	0
35	380	3	a	3100	h	p	1	1	1	1	1	0	1	0	0	0	1	0	0
36	4500	5	a	1110	h	p	1	1	1	1	1	0	1	0	0	0	1	0	0
37	100	5	a	3104	g	p	1	1	1	1	1	0	1	0	0	0	1	1	0
38	10500	4	a	1110	i	p	1	0	1	0	1	0	0	1	0	0	1	0	0
39	7200	5	a	5100	i	p	1	1	1	1	1	0	0	0	0	0	1	0	0
40	3200	5	a	5100	i	p	1	1	1	1	1	0	0	0	0	0	1	0	0
41	2300	5	a	5100	i	p	1	1	1	1	1	0	0	0	0	0	1	0	0
42	5800	3	a	3100	j	p	1	1	1	1	1	0	1	0	0	0	1	1	0
43	41200	5	a	5100	h	p	1	1	1	1	1	0	0	0	0	0	0	0	0
44	5600	3	a	3100	h	p	1	1	1	1	1	0	1	0	0	0	1	1	0
45	7000	5	a	3100	h	p	0	1	0	0	0	0	1	0	0	0	0	0	0
46	1300	5	a	3100	i	p	0	1	1	1	0	0	1	0	0	0	0	0	0
47	10750	3	a	1000	h	p	1	1	1	1	0	0	0	0	0	0	1	0	0
48	11020	3	a	1000	h	p	0	1	1	0	1	0	0	1	0	0	1	0	0
49	11040	3	a	1050	h	p	0	1	1	0	1	0	0	1	0	0	1	0	0
100	12150	3	a	5100	h	p	1	1	1	0	1	0	0	0	0	0	1	0	0
101	12230	3	a	3100	h	p	1	1	1	0	1	0	0	0	0	0	1	0	0
102	12250	3	a	1000	h	p	1	1	1	0	1	0	0	0	0	0	1	0	0
103	12260	3	a	1110	h	p	1	1	1	0	1	0	0	1	0	0	1	0	0
104	13100	3	a	1000	h	p	1	1	1	0	1	0	0	0	0	0	1	0	0
105	13120	3	a	5100	h	p	1	1	1	0	1	0	0	1	0	0	1	0	0
106	13140	3	a	1000	h	p	1	1	1	0	1	0	0	0	0	0	1	0	0
107	13160	3	a	1000	h	p	1	1	1	0	1	0	0	0	0	0	1	0	0
108	40010	3	a	1000	g	p	1	1	1	1	1	1	1	0	0	0	1	1	0
109	14010	3	a	3104	g	p	1	0	0	0	1	0	0	0	0	0	1	1	0
110	11180	3	a	1000	i	p	1	1	1	0	1	0	0	0	0	0	1	0	0
111	1900	5	a	1000	j	p	1	1	1	0	1	0	1	0	0	0	0	0	0
112	45955	3	a	3100	i	p	1	1	1	0	1	0	1	0	0	0	0	0	0
113	88678	2	a	1000	j	p	1	1	1	1	1	1	0	0	0	0	1	0	0
114	2020	5	a	2300	i	p	1	1	1	1	1	0	1	0	0	0	1	0	0
115	910	5	a	2300	i	p	1	1	1	1	1	0	1	0	0	0	1	0	0
116	82180	3	a	3100	i	p	1	1	1	1	1	0	0	0	0	0	1	0	0
117	4020	5	a	5100	h	p	1	1	1	1	1	0	1	0	0	0	1	0	0
118	1050	3	a	1000	g	p	1	1	1	1	1	0	0	0	0	0	1	0	0
119	83400	3	a	5100	h	p	1	1	1	1	1	0	0	1	0	0	1	0	0
120	1050	3	a	1000	g	p	1	1	1	1	1	0	0	0	0	0	1	0	0
121	33400	3	a	3100	h	p	1	1	1	1	1	0	0	1	0	0	1	0	0
122	50725	3	a	3100	h	p	0	1	0	0	1	0	0	0	0	0	0	0	0
123	72800	3	a	3100	h	p	0	1	0	0	1	0	1	1	0	0	0	0	0

	asc	action	subcat	desig	rank	code	s1	s2	s3	s4	s5	s6	s7	s8	s9	s10	s11	s12	s13
124	35500	3	a	3100	h	p	0	1	0	0	1	0	1	0	0	0	0	0	0
125	8615	2	a	1110	g	p	1	1	1	1	1	0	0	1	0	0	1	0	0
126	8635	2	a	1110	h	p	1	1	1	1	1	0	0	1	0	0	1	0	0
127	8630	2	a	1110	h	p	1	1	1	1	1	0	0	1	0	0	1	0	0
128	8625	2	a	1110	h	p	1	1	1	1	1	0	0	1	0	0	1	0	0
129	8620	2	a	1110	h	p	1	1	1	1	1	0	0	1	0	0	1	0	0
130	200	5	a	5100	h	p	1	1	1	1	1	0	1	0	0	0	1	1	0
131	200	5	a	5100	h	p	1	1	1	1	1	0	1	0	0	0	1	1	0
132	200	5	a	5100	h	p	1	1	1	1	1	0	1	0	0	0	1	1	0
133	200	5	a	5100	h	p	1	1	1	1	1	0	1	0	0	0	1	1	0
134	75600	3	a	1300	h	p	1	1	1	1	1	0	1	0	0	0	0	0	0
135	300	5	a	5104	g	p	1	1	1	1	1	0	1	0	0	0	1	1	0
136	30200	5	a	5100	i	p	1	1	1	1	1	0	1	0	0	0	1	1	0
137	11000	4	a	1110	i	p	1	1	1	1	1	0	1	1	0	0	0	0	0
138	75700	3	a	1000	h	p	1	1	1	1	1	0	1	1	0	0	0	0	0
139	75900	3	a	1050	h	p	1	1	1	1	1	0	1	0	0	0	0	0	0
140	760	3	a	1630	h	p	1	1	1	1	1	0	1	0	0	0	0	0	0
141	10010	5	a	3100	g	p	0	1	0	0	1	0	1	0	0	0	0	0	0
142	70010	3	a	3100	g	p	1	1	1	1	1	1	1	0	0	0	0	0	0
143	46020	3	a	3100	i	p	0	1	0	0	1	1	1	0	0	0	0	1	0
144	90030	3	a	3100	h	p	0	1	1	1	1	0	1	0	0	0	0	0	0
145	31110	3	a	3100	h	p	0	1	1	1	1	0	1	0	0	0	0	0	0
146	80200	5	a	5100	i	p	0	1	1	1	1	0	0	0	0	0	0	0	0
147	90030	5	a	5100	i	p	1	0	1	1	0	0	0	0	1	0	0	0	0
148	4545	3	a	1000	h	p	0	0	1	1	0	0	0	0	1	0	0	0	0
149	5200	3	a	1050	h	p	1	0	1	1	0	0	0	0	0	0	0	0	0
150	5020	5	a	2300	i	p	1	1	1	1	1	0	1	0	0	0	1	1	0
151	2611	2	a	2300	h	p	1	1	1	1	1	0	1	0	0	0	1	1	0
152	14460	5	a	2300	i	p	1	1	1	1	1	0	1	0	0	0	1	1	0
153	90160	3	a	2300	h	p	1	1	1	1	1	0	1	0	0	0	1	1	0
154	927	5	a	2300	j	p	1	1	1	1	1	0	1	0	0	0	1	1	0
155	90270	3	a	2300	i	p	1	1	1	1	1	0	1	0	0	0	1	1	0
156	40060	4	a	1000	i	p	1	1	1	1	0	0	0	0	0	0	0	0	0
157	30730	5	a	3100	i	p	1	1	1	1	0	0	1	0	0	0	0	0	0
158	31236	3	a	3100	h	p	0	1	0	0	0	0	1	0	1	0	0	0	1
159	72300	3	a	1000	h	p	1	1	1	1	1	0	1	0	0	0	1	1	0
160	7070	3	a	3100	i	p	1	1	1	1	1	0	1	0	0	0	1	0	1
161	4010	5	a	5100	h	p	0	1	0	0	0	0	0	1	0	1	0	0	0
162	10700	3	a	3100	j	p	0	1	1	1	0	0	0	0	1	0	1	0	0
163	2640	3	a	3100	h	p	0	1	0	0	0	0	0	0	0	0	0	0	0
164	1125	3	a	1610	i	p	1	1	1	1	0	0	0	0	0	0	0	0	0

	bic	action	subcat	seq	one	code	11	12	13	14	15	16	17	18	19	20	21	22	23
165	50400	5	a	3100	h	p	1	1	1	1	1	0	0	0	0	0	0	0	0
166	4010	5	a	5100	h	p	0	1	0	0	0	0	0	0	1	0	1	0	0
167	135	3	a	5100	i	p	0	1	0	0	0	0	0	0	0	0	0	0	0
168	1050	3	a	1610	g	p	1	1	1	1	0	0	0	0	0	0	0	0	0
169	40010	5	a	3100	h	p	1	1	1	1	0	0	1	0	1	0	0	0	0
170	80010	5	a	3100	i	p	1	1	1	1	0	0	1	0	1	0	0	0	0
171	4010	5	a	5100	h	p	0	1	0	0	0	0	0	0	1	0	0	0	0
172	4003	5	a	5100	h	p	0	1	0	0	0	0	0	0	1	0	1	0	0
173	72146	2	a	1000	h	p	0	1	1	0	0	0	0	0	0	0	0	0	0
174	7075	2	a	3100	h	p	0	1	1	1	1	0	0	0	0	0	0	0	0
175	7070	2	a	3104	g	p	0	1	1	1	1	0	0	0	0	0	0	0	0
176	12600	3	a	3100	i	p	0	1	0	1	0	0	1	1	0	0	0	0	0
177	36700	3	a	3100	i	p	0	1	0	1	0	0	1	1	0	0	0	0	0
178	7982	2	a	1110	h	p	1	1	1	1	1	0	1	0	0	0	0	0	0
179	7978	2	a	1110	h	p	1	1	1	0	1	0	1	1	0	0	0	0	0
180	7994	2	a	1110	h	p	1	1	1	0	1	0	1	1	0	0	0	0	1
181	7990	2	a	1110	h	p	1	1	1	0	1	1	1	1	0	0	0	0	0
182	12040	5	a	5100	i	p	0	0	1	1	0	0	0	0	1	0	1	0	0
183	14020	5	b	3100	h	p	0	1	0	0	0	0	1	0	0	0	0	0	0
184	3370	3	a	3100	h	p	1	1	1	1	0	0	1	0	0	0	1	0	0
185	3380	3	a	1000	i	p	1	1	1	1	0	0	1	0	0	0	1	0	0
186	3390	3	a	1000	i	p	1	1	1	1	0	0	1	0	0	0	1	0	0
187	31200	3	a	3100	h	p	0	1	0	1	0	0	1	0	0	0	1	1	0
188	42600	3	a	3100	i	p	0	1	0	1	0	0	1	0	0	0	1	1	0
189	49600	3	a	3100	i	p	0	1	0	1	0	0	1	0	0	0	1	1	0
190	48600	3	a	3100	i	p	0	1	0	0	0	0	1	1	0	0	0	0	0
191	5766	2	a	1000	i	p	0	0	0	0	0	0	1	0	0	0	0	0	0
192	29750	3	a	3100	i	p	0	0	0	0	0	0	1	0	0	0	0	0	1
193	29550	3	a	3100	i	p	0	0	0	0	0	0	1	0	0	0	0	0	1
194	39688	3	a	3100	h	p	0	0	0	1	0	0	0	0	0	0	0	0	1
195	7050	3	a	3104	g	p	0	0	0	1	1	0	1	0	0	0	0	0	0
196	39385	3	a	3100	i	p	0	1	1	0	1	0	1	0	0	0	0	0	1
197	30300	3	a	3100	h	p	1	1	1	1	1	0	0	1	0	0	0	0	0
198	11400	3	a	3100	h	p	0	1	0	0	0	0	0	0	0	0	0	0	1
199	12500	3	a	3100	h	p	0	1	0	0	1	1	1	1	0	0	0	0	0
200	4282	3	a	3100	h	p	1	1	0	1	1	1	1	0	0	0	0	0	0
201	31410	3	a	1000	i	p	1	1	1	1	1	1	1	0	0	0	0	0	0
202	31420	3	a	1000	i	p	1	1	1	1	1	1	1	0	0	0	0	0	0
203	31430	3	a	1050	i	p	1	1	1	1	0	1	1	0	0	0	0	0	0
204	9500	4	a	1050	h	p	0	1	1	1	1	1	0	0	1	0	0	0	0
205	14201	5	b	1302	i	p	0	1	1	1	1	0	1	0	0	1	1	1	0

	osc	echecn	subcat	desig	rank	code	s1	s2	s3	s4	s5	s6	s7	s8	s9	s10	s11	s12	s13
206	8100	5	b	1000	h	p	1	1	1	1	1	0	1	0	0	0	0	0	0
207	2010	3	b	5104	g	a	1	1	1	1	1	1	1	1	0	0	1	0	0
208	28200	5	b	1000	h	p	1	1	1	1	1	0	1	0	0	1	1	0	0
209	28200	5	b	1000	h	p	1	1	1	1	1	1	1	0	0	1	0	0	0
210	4000	5	b	1000	l	p	1	1	1	1	1	0	1	0	0	1	1	0	0
211	28200	5	b	1000	h	p	1	1	1	1	1	0	1	0	0	1	1	0	0
212	1200	5	b	1000	l	p	1	1	1	1	1	0	1	0	0	1	1	0	0
213	1920	4	b	3100	l	p	1	1	1	1	1	0	1	0	0	1	1	0	0
214	850	5	b	3100	l	p	1	1	1	1	1	0	1	1	0	1	1	0	0
215	1641	5	b	3100	l	p	1	1	1	1	1	0	1	1	0	1	1	0	0
216	3100	5	b	3100	l	p	1	1	1	1	1	0	1	1	0	1	1	0	0
217	9010	5	b	3100	h	p	1	1	1	1	1	0	1	1	0	1	1	1	0
218	28020	5	h	1000	h	p	1	1	1	1	1	0	1	1	0	0	1	1	0
219	1600	5	b	3104	g	a	1	1	1	1	1	1	1	1	1	0	0	0	0
220	52000	4	b	3100	h	p	1	1	1	1	1	1	1	1	0	1	1	0	0
221	20010	5	b	3100	h	p	1	1	1	1	1	0	1	0	0	0	1	0	1
222	510	5	b	3160	h	p	1	1	1	1	1	1	1	1	0	1	1	0	0
223	781	5	b	1000	l	p	1	1	1	1	1	0	1	0	0	1	0	0	0
224	28200	5	b	1000	h	p	1	1	1	1	1	0	1	0	0	0	1	0	0
225	21500	5	b	1000	l	p	1	1	1	1	1	0	1	0	0	1	1	0	0
226	4100	5	b	3100	l	p	0	1	0	0	0	0	0	1	1	0	0	0	0
227	5400	5	b	3100	h	p	1	1	1	1	1	1	1	0	0	0	0	1	0
228	1050	5	b	3100	l	p	1	1	1	1	0	0	1	0	0	1	1	0	0
229	40050	5	b	3104	g	a	1	1	1	1	1	0	1	0	0	0	0	1	0
230	320	5	b	3100	h	p	1	1	1	1	1	0	1	0	0	0	0	1	0
231	310	5	b	1000	l	p	1	1	1	1	1	0	1	0	0	0	0	1	0
232	4100	5	b	3100	h	p	1	1	1	1	1	0	1	0	0	0	0	1	0
233	425	5	b	1000	h	p	1	1	1	1	1	0	1	0	0	0	0	0	0
234	80140	5	b	2300	l	p	1	1	1	1	1	0	1	0	0	0	1	0	0
235	907	5	b	2300	l	p	1	1	1	1	1	0	1	0	0	0	1	0	0
236	910	5	b	2300	l	p	1	1	1	1	1	0	1	0	0	0	1	0	0
237	425	5	b	1000	h	p	1	1	1	1	1	0	1	0	0	0	1	0	0
238	38200	5	b	1000	l	p	1	1	1	1	1	0	1	0	0	0	1	0	0
239	81180	3	b	1110	h	p	1	1	1	1	1	0	1	0	0	0	1	1	0
240	6000	5	b	1000	g	p	1	1	1	1	1	0	1	0	0	0	1	1	0
241	150	5	b	1000	l	p	1	1	1	1	1	0	1	0	0	0	1	1	0
242	14020	3	b	2300	l	p	1	1	1	1	1	0	1	0	0	0	1	0	0
243	14700	4	b	3100	h	p	1	1	1	1	1	0	1	0	0	0	1	1	0
244	4000	5	b	3100	l	p	1	1	1	1	1	0	1	0	0	0	1	1	0
245	7200	5	b	3100	h	p	1	0	1	1	1	0	1	0	0	0	1	0	0
246	310	5	b	1000	l	p	1	1	1	1	1	0	1	0	0	0	1	0	0

	psc	schelon	subcat	desig	rank	code	s1	s2	s3	s4	s5	s6	s7	s8	s9	s10	s11	s12	s13
247	11100	5	b	3100	n	a	0	1	0	1	1	0	1	1	0	0	0	0	0
248	1000	5	b	3100	n	a	1	1	1	1	0	0	1	0	0	0	1	1	0
249	720	5	b	2300	n	a	1	1	1	1	1	0	1	0	0	0	1	0	0
250	30	5	b	3100	n	a	0	1	0	0	1	0	1	0	0	0	0	0	0
251	38200	5	b	1000	i	a	1	1	1	1	1	0	1	0	0	0	0	0	0
252	2010	3	b	5104	g	a	1	1	1	1	1	0	0	0	0	0	0	0	0
253	7030	3	b	3100	n	a	1	1	1	1	1	0	1	1	0	0	0	0	0
254	51000	5	b	3100	j	a	1	1	1	1	1	0	1	0	0	0	0	0	0
255	70100	5	b	3100	n	a	0	1	1	1	1	0	1	0	0	0	0	0	0
256	5510	5	b	3100	j	a	1	1	1	1	1	0	1	0	0	0	0	1	0
257	6020	5	b	3100	n	a	1	1	1	1	1	0	1	0	0	0	0	1	0
258	20200	3	b	2300	i	a	1	1	1	1	1	0	1	0	0	0	1	1	0
259	30100	5	b	2300	i	a	1	1	1	1	1	0	1	0	0	0	1	1	0
260	72000	4	a	3100	n	a	1	1	1	1	1	0	1	0	0	0	1	1	0
261	722	5	b	2300	n	a	1	1	1	1	1	0	1	0	0	0	1	1	0
262	705	5	b	2300	i	a	1	1	1	1	1	0	1	0	0	0	1	1	0
263	6020	5	b	2300	n	a	1	1	1	1	1	0	1	0	0	0	1	1	0
264	905	5	b	2300	i	a	1	1	1	1	1	0	1	0	0	0	1	1	0
265	720	5	b	3100	i	a	1	1	1	1	0	0	1	0	0	0	0	0	0
266	920	5	b	3100	n	a	1	1	1	1	1	1	1	0	0	0	0	0	0
267	24240	5	c	3100	j	a	0	1	0	0	1	0	1	0	0	0	0	1	0
268	600	5	c	1000	i	a	0	1	0	0	0	0	1	0	0	0	0	0	0
269	4130	5	c	1000	i	a	0	0	0	0	1	0	0	0	0	0	0	0	1
270	4410	5	c	1000	n	a	0	1	0	0	1	0	0	0	0	0	0	0	1
271	8500	5	c	1050	g	a	1	1	1	1	1	1	0	0	0	0	0	0	0
272	19500	5	c	1000	i	a	1	1	1	1	0	0	0	0	0	0	0	0	0
273	67200	5	c	1000	j	a	0	1	0	0	0	0	1	0	0	0	0	1	0
274	18200	5	c	1000	i	a	0	1	0	0	0	0	1	0	0	0	0	1	0
275	920	5	c	1050	n	a	0	1	0	0	0	0	1	0	0	0	0	1	0
276	13040	5	c	2300	i	a	1	1	1	1	1	0	1	0	0	0	1	0	0
277	13080	5	c	2300	j	a	1	1	1	1	1	0	1	0	0	0	1	0	0
278	340	3	b	1000	g	a	1	1	1	1	1	0	1	1	0	1	0	0	0
279	340	3	b	1000	g	a	1	1	1	1	1	1	1	1	0	0	0	0	0
280	510	5	b	1000	g	a	1	0	1	1	1	0	1	0	0	0	1	1	0
281	420	5	b	2300	n	a	1	1	1	1	1	1	1	0	1	0	0	0	0
282	902	5	b	2300	g	a	1	1	1	1	1	1	1	0	1	0	0	0	0
283	905	5	b	2300	g	a	1	1	1	1	1	1	1	0	1	0	0	0	0
284	905	5	b	2300	g	a	1	1	1	1	1	1	1	0	1	0	0	0	0
285	905	5	b	2300	n	a	1	1	1	1	1	1	1	0	1	0	0	0	0
286	1910	4	b	1000	g	a	1	1	1	1	1	0	1	1	0	0	0	0	0
287	905	5	b	2300	g	a	1	1	1	1	1	1	1	0	1	0	0	0	0

	bsc	echelon	subcat	desig	rank	code	s1	s2	s3	s4	s5	s6	s7	s8	s9	s10	s11	s12	s13
288	5001	5	b	1000	g	a	1	1	1	1	0	0	1	0	0	1	0	0	0
289	910	5	b	2300	h	a	1	1	1	1	1	1	1	0	1	0	0	0	0
290	5001	5	b	1000	g	a	1	1	1	1	0	0	1	0	0	1	1	0	0
291	915	5	b	2300	g	a	1	1	1	1	1	1	1	0	1	0	0	0	0
292	6001	5	b	1000	g	a	1	1	1	1	0	0	1	0	0	1	0	0	0
293	1500	3	b	1000	h	a	1	1	1	1	1	1	0	1	0	0	1	0	0
294	6002	5	b	1000	g	a	1	1	1	1	0	0	1	0	0	1	0	0	0
295	5001	5	b	1000	g	a	1	1	1	1	0	0	1	0	0	1	0	0	0
296	5001	5	b	1000	g	a	1	1	1	1	0	0	1	0	0	1	0	0	0
297	7010	3	b	1000	g	a	1	1	1	1	1	1	0	1	0	0	1	0	0
298	7100	5	b	1000	g	a	1	1	1	1	1	1	1	1	0	0	0	1	0
299	7100	5	b	1000	g	a	1	1	1	1	1	1	1	1	0	0	0	0	0
300	10040	3	b	2300	g	a	1	1	1	1	1	1	1	0	1	0	0	0	0
301	10100	5	b	1000	h	a	1	1	1	1	1	1	1	0	1	0	0	0	0
302	10140	3	b	2300	g	a	1	1	1	1	1	1	1	0	1	0	0	0	0
303	11010	3	b	1000	g	a	1	1	1	1	1	1	1	0	0	1	1	0	0
304	24010	3	b	1000	g	a	1	1	1	1	1	0	0	1	0	0	0	0	0
305	11020	5	b	2300	g	a	1	1	1	1	1	1	1	0	1	0	0	0	0
306	11020	5	b	2300	h	a	1	1	1	1	1	1	1	0	1	0	0	0	0
307	11020	5	b	2300	g	a	1	1	1	1	1	1	1	0	1	0	0	0	0
308	11020	5	b	2300	g	a	1	1	1	1	1	1	1	0	1	0	0	0	0
309	11020	5	b	2300	g	a	1	1	1	1	1	1	1	0	1	0	0	0	0
310	22080	5	b	2300	h	a	1	1	1	1	1	1	1	0	1	0	0	0	0
311	31010	3	b	1000	g	a	1	1	1	1	1	1	1	1	0	1	0	0	0
312	10730	3	a	1000	g	a	1	0	1	1	1	1	1	0	0	0	0	0	0
313	11010	3	a	1000	g	a	1	1	1	1	1	1	0	1	0	0	0	0	0
314	13030	3	a	1000	g	a	1	1	1	1	1	0	0	0	0	1	0	0	0
315	2609	2	a	2300	g	a	1	1	1	1	1	1	1	0	0	1	0	0	0
316	2610	2	a	2300	g	a	1	1	1	1	1	1	1	0	0	0	0	0	0
317	11220	3	a	2300	h	a	1	1	1	1	1	1	1	0	0	0	0	0	0
318	72250	3	a	1000	g	a	1	1	1	1	1	1	1	1	0	1	0	0	0
319	6580	2	a	1000	h	a	1	1	1	1	1	1	1	1	0	1	0	0	0
320	7974	2	a	1110	g	a	1	1	1	1	1	1	0	1	0	1	0	0	1
321	5990	2	a	1000	h	a	1	1	1	1	1	1	0	0	0	0	1	0	0
322	6053	2	a	1000	h	a	1	1	1	1	1	1	0	1	0	0	1	0	0
323	60090	3	a	1000	g	a	0	1	0	0	1	1	0	0	1	0	0	0	0
324	6061	2	a	1050	g	a	1	1	1	1	1	1	0	1	0	0	1	0	0
325	370	3	a	1000	h	a	1	1	1	1	1	1	0	0	1	0	1	0	0
326	2800	2	a	1000	g	a	1	1	1	1	1	1	0	1	0	0	0	0	0
327	7070	5	a	1500	h	a	1	1	1	1	1	1	0	0	0	0	0	1	0
328	2105	5	a	1302	g	a	1	1	1	0	1	1	1	0	0	1	0	0	1

	bsc	echelon	subcat	desig	rank	code	s1	s2	s3	s4	s5	s6	s7	s8	s9	s10	s11	s12	s13
329	10730	3	a	1000	g	a	1	1	1	0	1	1	0	1	0	0	0	0	0
330	11010	3	a	1000	g	a	1	1	1	0	1	1	0	0	0	0	0	0	0
331	13030	3	a	1000	g	a	1	1	1	0	1	1	0	1	0	0	0	0	0
332	23400	3	a	1000	g	a	1	1	1	1	1	0	1	0	0	0	0	0	0
333	11020	3	a	2300	h	a	1	1	1	1	1	1	1	0	1	0	0	0	0
334	13020	3	a	2300	g	a	1	1	1	1	1	1	1	0	1	0	0	0	0
335	50600	2	a	1000	u	a	1	1	0	1	1	1	0	0	0	0	0	0	0
336	50700	2	a	1000	h	a	1	1	0	1	1	1	0	1	0	0	0	0	0
337	17550	1	a	1000	h	a	0	1	0	0	1	1	0	0	0	0	0	0	0
338	72010	3	a	1050	h	a	1	1	1	1	1	1	0	1	0	0	0	0	0
339	5010	3	a	1110	g	a	1	1	1	1	1	1	1	0	1	0	0	0	0
340	72156	2	a	1000	g	a	1	1	1	1	1	1	1	1	0	0	0	0	0
341	370	3	a	1000	h	a	1	1	1	1	1	1	1	1	0	0	0	0	0
342	1020	3	a	1000	h	a	1	1	1	1	1	1	0	0	0	0	1	0	0
343	11252	2	a	1110	g	a	1	1	1	1	1	1	0	1	0	0	0	0	0
344	5076	2	a	1000	h	a	1	1	1	1	1	1	0	1	0	1	0	0	0
345	5078	2	a	1000	h	a	1	1	1	1	1	1	0	1	0	1	0	0	0
346	5204	2	a	1000	h	a	1	1	1	1	1	1	1	0	0	0	0	0	0

APPENDIX C

Hypothesis:

H_0 : The requirement for a particular billet skill is independent of a particular identifier category.

H_1 : The requirement for a particular billet skill is dependent upon a particular identifier category.

Critical Values:

Command Echelon = 9.24
 Rank = 6.25
 Designator = 18.55
 P or Q Coded = 2.70

Budget Analysis Skills (S1):

	<u>Chi-squared value</u>	<u>Decision on H_0</u>
Command Echelon	10.19	Reject
Rank	11.92	Reject
Designator	53.38	Reject
P or Q Coded	14.96	Reject

Financial Policy and Advisory Skills (S2):

	<u>Chi-squared value</u>	<u>Decision on H_0</u>
Command Echelon	10.54	Reject
Rank	2.99	Accept
Designator	14.17	Accept
P or Q Coded	0.75	Accept

Budget Formulation Skills (S3):

	<u>Chi-squared value</u>	<u>Decision on H_0</u>
Command Echelon	13.70	Reject
Rank	7.15	Reject
Designator	42.23	Reject
P or Q Coded	7.14	Reject

Budget Execution Skills (S4):

	<u>Chi-squared value</u>	<u>Decision on H_0</u>
Command Echelon	15.10	Reject
Rank	11.79	Reject
Designator	24.78	Reject
P or Q Coded	9.78	Reject

DoN Budgetary Knowledge Skills (S5):

	<u>Chi-squared value</u>	<u>Decision on H₀</u>
Command Echelon	7.48	Accept
Rank	18.71	Reject
Designator	34.64	Reject
P or Q Coded	6.28	Reject

PPBS Skills (S6):

	<u>Chi-squared value</u>	<u>Decision on H₀</u>
Command Echelon	9.81	Reject
Rank	57.73	Reject
Designator	35.82	Reject
P or Q Coded	165.40	Reject

Accounting Technical Skills (S7):

	<u>Chi-squared value</u>	<u>Decision on H₀</u>
Command Echelon	44.95	Reject
Rank	8.06	Reject
Designator	61.83	Reject
P or Q Coded	0.23	Accept

Communications and Liaison Skills (S8):

	<u>Chi-squared value</u>	<u>Decision on H₀</u>
Command Echelon	39.73	Reject
Rank	14.93	Reject
Designator	55.67	Reject
P or Q Coded	6.33	Reject

Contract Administration Skills (S9):

	<u>Chi-squared value</u>	<u>Decision on H₀</u>
Command Echelon	14.93	Reject
Rank	15.53	Reject
Designator	44.42	Reject
P or Q Coded	46.25	Reject

Financial Reporting Skills (S10):

	<u>Chi-squared value</u>	<u>Decision on H₀</u>
Command Echelon	2.91	Accept
Rank	3.94	Accept
Designator	19.68	Reject
P or Q Coded	8.51	Reject

Supervisory Skills (S11):

	<u>Chi-squared value</u>	<u>Decision on H₀</u>
Command Echelon	4.79	Accept
Rank	18.53	Reject
Designator	29.21	Reject
P or Q Coded	38.07	Reject

Auditing Skills (S12):

	<u>Chi-squared value</u>	<u>Decision on H₀</u>
Command Echelon	43.41	Reject
Rank	1.91	Accept
Designator	32.63	Reject
P or Q Coded	12.45	Reject

Weapons Systems Acquisition Skills (S13):

	<u>Chi-squared value</u>	<u>Decision on H₀</u>
Command Echelon	1.54	Accept
Rank	1.34	Accept
Designator	26.55	Reject
P or Q Coded	0.18	Accept

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